



William Miles Barnes, B.A.

PROCEEDINGS

OF THE

DORSET NATURAL HISTORY

AND

ANTIQUARIAN FIELD CLUB.

EDITED BY

HENRY SYMONDS.

VOLUME XXXVII.

Dorchester :

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The Dorset Natural History and Antiquarian Field Club.

INAUGURATED MARCH 26TH, 1875.

Presidents :

1875-1902—J. C. Mansel-Pleydell, Esq., B.A., F.G.S., F.L.S.

1902-1904—The Lord Eustace Cecil, F.R.G.S.

1904 * Nelson M. Richardson, Esq., B.A.

Vice-Presidents :

1875-1882—The Rev. H. H. Wood, M.A., F.G.S.

1875-1884—Professor James Buckman, F.S.A., F.G.S., F.L.S.

1880-1900—The Rev. Canon Sir Talbot Baker, Bart., M.A.

1880-1900—General Pitt-Rivers, F.R.S.

1880-1917—* The Rev. O. Pickard-Cambridge, M.A., F.R.S., F.Z.S.

1885 * The Earl of Moray, M.A., F.S.A. Scot., F.G.S.

1892-1904—Nelson M. Richardson, Esq., B.A.

1900-1902 } * The Lord Eustace Cecil, F.R.G.S.

1904 }

1900-1909—W. H. Hudleston, Esq., M.A., F.R.S., F.G.S., F.L.S., *Past Pres.*

Geol. Society.

1900-1904—Vaughan Cornish, Esq., D.Sc., F.C.S., F.R.G.S.

1900 * Captain G. R. Elwes.

1902-1916—* H. Colley March, Esq., M.D., F.S.A.

1904 * The Rev. Herbert Pentin, M.A.

1904-1916—* The Rev. W. Miles Barnes, B.A.

1904 * The Rev. Canon J. C. M. Mansel-Pleydell, M.A.

1904-1908—R. Bosworth Smith, Esq., M.A.

1908-1909—Henry Storks Eaton, Esq., M.A., *Past Pres. Roy. Met. Society.*

1909 * The Rev. Canon C. H. Mayo, M.A., *Dorset Editor of "Somerset and Dorset Notes and Queries."*

1909 * E. R. Sykes, Esq., B.A., F.Z.S., *Past Pres. Malacological Society.*

1911-1912—The Rev. C. W. H. Dicker, R.D.

1912 * Alfred Pope, Esq., F.S.A.

1913 * Henry Symonds, Esq., F.S.A.

1913 * His Honour J. S. Udall, F.S.A.

1915 * Captain John E. Acland, M.A., F.S.A.

1916 Sir Daniel Morris, K.C.M.G., D.Sc., D.C.L., F.L.S.

Hon. Secretaries :

1875-1884—Professor James Buckman, F.S.A., F.G.S., F.L.S.

1885-1892—The Earl of Moray, M.A., F.S.A. Scot., F.G.S.

1892-1902—Nelson M. Richardson, Esq., B.A.

1902-1904—H. Colley March, Esq., M.D., F.S.A.

1904 * The Rev. Herbert Pentin, M.A.

Hon. Treasurers :

1875-1882—The Rev. H. H. Wood, M.A., F.G.S.

1882-1900—The Rev. O. Pickard-Cambridge, M.A., F.R.S., F.Z.S.

1901-1910—Captain G. R. Elwes.

1910-1915—The Rev. Canon J. C. M. Mansel-Pleydell, M.A.

1915 * Captain John E. Acland, M.A., F.S.A.

Hon. Editors :

1875-1884—Professor James Buckman, F.S.A., F.G.S., F.L.S.

1885-1892—The Earl of Moray, M.A., F.S.A. Scot., F.G.S.

1892-1901—Nelson M. Richardson, Esq., B.A.

1901-1906—The Rev. W. Miles Barnes, B.A.

1906-1909—The Rev. Herbert Pentin, M.A.

1909-1912—The Rev. C. W. H. Dicker, R.D.

1912 * Henry Symonds, Esq., F.S.A.

* The asterisk indicates the present officials of the Club.

RULES

OF

THE DORSET NATURAL HISTORY AND ANTIQUARIAN FIELD CLUB.

OBJECT AND CONSTITUTION.

1.—The Club shall be called The Dorset Natural History and Antiquarian Field Club, and shall have for a short title The Dorset Field Club.

The object of the Club is to promote and encourage an interest in the study of the Physical Sciences and Archæology generally, especially the Natural History of the County of Dorset and its Antiquities, Prehistoric records, and Ethnology. It shall use its influence to prevent, as far as possible, the extirpation of rare plants and animals, and to promote the preservation of the Antiquities of the County.

2.—The Club shall consist of (i.) three Officers, President, Honorary Secretary, and Honorary Treasurer, who shall be elected annually, and shall form the Executive body for its management; (ii.) Vice-Presidents, of whom the Honorary Secretary and Treasurer shall be two, *ex officio*; (iii.) The Honorary Editor of the Annual Volume of Proceedings; (iv.) Ordinary Members; (v.) Honorary Members. The President, Vice-Presidents, and Editor shall form a Council to decide questions referred to them by the Executive and to elect Honorary Members. The Editor shall be nominated by one of the incoming Executive and elected at the Annual Meeting.

There may also be one or more Honorary Assistant Secretaries, who shall be nominated by the Honorary Secretary, seconded by the President or Treasurer, and elected by the Members at the Annual Meeting.

Members may be appointed by the remaining Officers to fill interim vacancies in the Executive Body until the following Annual Meeting.

The number of the Club shall be limited to 400, power being reserved to the Council to select from the list of candidates persons, whose membership they may consider to be advantageous to the interests of the Club, to be additional Members.

PRESIDENT AND VICE-PRESIDENTS.

3.—The President shall take the chair at all Meetings, and have an original and a casting vote on all questions before the Meeting. In addition to the two *ex-officio* Vice-Presidents, at least three others shall be nominated by the President, or, in his absence, by the Chairman, and elected at the Annual Meeting.

HON. SECRETARY.

4.—The Secretary shall perform all the usual secretarial work; cause a programme of each Meeting to be sent to every Member seven days at least before such Meeting; make all preparations for carrying out Meetings and, with or without the help of a paid Assistant Secretary or others, conduct all Field Meetings. On any question arising between the Secretary (or Acting Secretary) and a Member at a Field Meeting, the decision of the Secretary shall be final.

The Secretary shall receive from each Member his or her share of the day's expenses, and thereout defray all incidental costs and charges of the Meeting, rendering an account of the same before the Annual Meeting to the Treasurer; any surplus of such collection shall form part of the General Fund, and any deficit be defrayed out of that Fund.

HON. TREASURER.

5.—The Treasurer shall keep an account of Subscriptions and all other moneys of the Club received and of all Disbursements, rendering at the Annual General Meeting a balance sheet of the same, as well as a general statement of the Club's finances. He shall send copies of the Annual Volume of Proceedings for each year to Ordinary Members who have paid their subscriptions for that year (as nearly as may be possible, in the order of such payment), to Honorary Members, and to such Societies and individuals as the Club may, from time to time, appoint to receive them. He shall also furnish a list at each Annual Meeting, containing the names of all Members in arrear, with the amount of their indebtedness to the Club. He shall also give notice of their election to all New Members.

ORDINARY MEMBERS.

6.—Ordinary Members are entitled to be present and take part in the Club's proceedings at all Meetings, and to receive the published "Proceedings" of the Club, when issued, for the year for which their subscription has been paid.

7.—Every candidate for admission shall be nominated in writing by one Member and seconded by another, to both of whom he must be personally known. He may be proposed at any Meeting, and his name shall appear in the programme of the first following Meeting at which a Ballot is held, when he shall be elected by ballot, one black ball in six to exclude. Twelve Members shall form a quorum for the purpose of election. A Ballot shall be held at the Annual and Winter Meetings, and may be held at any other Meeting, should the Executive so decide, notice being given in the programme. In the event of the number of vacancies being less than the number of candidates at four successive Meetings, the names of any candidates proposed at the first of such Meetings who have not been elected at one of them shall be withdrawn, and shall not be eligible to be again proposed for election for at least a year after such withdrawal. Provided that if at any Meeting there shall be no vacancies available, it shall not be counted in estimating the above named four Meetings.

8.—The Annual Subscription shall be 10s., which shall become due and payable in advance on the 1st of January in each year. Subscriptions paid on election after September in each year shall be considered as subscriptions for the following year, unless otherwise agreed upon by such Member and the Treasurer. Every Member shall pay immediately after his election the sum of ten shillings as Entrance Fee, in addition to his first Annual Subscription.

9.—No person elected a Member shall be entitled to exercise any privilege as such until he has paid his Entrance Fee and first Subscription, and no Member shall be entitled to receive a copy of the "Proceedings" for any year until his Subscription for that year has been paid.

10.—A registered letter shall be sent by the Hon. Treasurer to any Member whose Subscription is in arrear at the date of any Annual Meeting, demanding payment within 28 days, failing which he shall cease to be a Member of the Club, but shall, nevertheless, be liable for the arrears then due.

11.—Members desiring to leave the Club shall give notice of the same in writing to the Treasurer (or Secretary), but, unless such notice is given before the end of January in any year, they shall be liable to pay the Annual Subscription due to the Club on and after January 1st in that year.

HONORARY MEMBERS.

12.—Honorary Members shall consist of persons eminent for scientific or natural history attainments, and shall be elected by the Council. They pay no subscription, and have all the privileges of Ordinary Members, except voting.

MEETINGS.

13.—The Annual General Meeting shall be held as near the first week in May as may be convenient; to receive the outgoing President's Address (if any) and the Treasurer's financial report; to elect the Officers and Editor for the ensuing year; to determine the number (which shall usually be three or four), dates, and places of Field Meetings during the ensuing summer, and for general purposes.

14.—Two Winter Meetings shall usually be held in or about the months of December and February for the exhibition of Objects of Interest (to which not more than one hour of the time before the reading of the Papers shall be devoted), for the reading and discussion of Papers, and for general purposes.

The Dates and Places of the Winter and Annual Meetings shall be decided by the Executive.

15.—A Member may bring Friends to the Meetings subject to the following restrictions:—No person (except the husband, wife, or child of a Member), may attend the Meeting unaccompanied by the Member introducing him, unless such Member be prevented from attending by illness, and no Member may take with him to a *Field Meeting* more than one Friend, whose name and address must be submitted to the Hon. Secretary and approved by him or the Executive.

The above restrictions do not apply to the Executive or to the Acting Secretary at the Meeting.

16.—Members must give due notice (with prepayment of expenses) to the Hon. Secretary of their intention to be present, with or without a Friend, at any Field Meeting, in return for which the Secretary shall send to the Member a card of admission to the Meeting, to be produced when required. Any Member who, having given such notice, fails to attend, will be liable only for any expenses actually incurred on his account, and any balance will be returned to him on application. The sum of 1s., or such other amount as the Hon. Secretary may consider necessary, shall be charged to each person attending a Field Meeting, for Incidental Expenses.

17.—The Executive may at any time call a Special General Meeting of the Members upon their own initiative or upon a written requisition (signed by Eight Members) being sent to the Honorary Secretary. Any proposition to be submitted shall be stated in the Notice, which shall be sent to each Member of the Club not later than seven days before the Meeting.

PAPERS.

18.—Notice shall be given to the Secretary, a convenient time before each Meeting, of any motion to be made or any Paper or communication desired to be read, with its title and a short sketch of its scope or contents. The insertion of these in the Programme is subject to the consent of the Executive.

19.—The Publications of the Club shall be in the hands of the Executive, who shall appoint annually Three or more Ordinary Members to form with them and the Editor a Publication Committee for the purpose of deciding upon the contents of the Annual Volume. These contents shall consist of original papers and communications written for the Club, and either read, or accepted as read, at a General Meeting; also of the Secretary's Reports of Meetings, the Treasurer's Financial Statement and Balance Sheet, a list to date of all Members of the Club, and of those elected in the current or previous year, with the names of their proposers and seconders. The Annual Volume shall be edited by the Editor subject to the direction of the Publication Committee.

20.—Twenty-five copies of his paper shall be presented to each author whose communication shall appear in the volume as a separate article, on notice being given by him to the Publisher to that effect.

THE AFFILIATION OF SOCIETIES AND LIBRARIES TO THE CLUB.

21.—Any Natural History or Antiquarian Society in the County may be affiliated to the Dorset Field Club on payment of an annual fee of Ten Shillings, in return for which the annual volume of the Proceedings of the Field Club shall be sent to such Society.

Every affiliated Society shall send the programme of its Meetings to the Hon. Secretary of the Field Club, and shall also report any discoveries of exceptional interest. And the Field Club shall send its programme to the Hon. Secretary of each affiliated Society.

The Members of the Field Club shall not be eligible, *ipso facto*, to attend any Meetings of affiliated Societies, and the Members of any affiliated Society shall not be eligible, *ipso facto*, to attend any Meetings of the Field Club. But any Member of an affiliated Society shall be eligible to read a paper or make an exhibit at the Winter Meetings of the Field Club at Dorchester.

Any Public Library, or Club or School or College Library, in England or elsewhere, may be affiliated to the Dorset Field Club on payment of an annual fee of Ten Shillings, in return for which the annual volume of the Proceedings of the Field Club shall be sent to such Library.

SECTIONAL COMMITTEES.

22.—Small Committees may be appointed at the Annual General Meeting to report to the Club any interesting facts or discoveries relating to the various sections which they represent ; and the Committee of each section may elect one of their Members as a Corresponding Secretary.

NEW RULES.

23.—No alteration in or addition to these Rules shall be made except with the consent of a majority of three-fourths of the Members present at the Annual General Meeting, full notice of the proposed alteration or addition having been given both in the current Programme and in that of the previous Meeting.



The Dorset Natural History and Antiquarian Field Club.

INAUGURATED MARCH 26th, 1875.

President :

NELSON M. RICHARDSON, Esq., B.A.

Vice-Presidents :

THE LORD EUSTACE CECIL, F.R.G.S. (*Past President*).
 THE REV. HERBERT PENTIN, M.A. (*Hon. Secretary*).
 CAPTAIN JOHN E. ACLAND, M.A., F.S.A. (*Hon. Treasurer*).
 HENRY SYMONDS, Esq., F.S.A. (*Hon. Editor*).
 CAPTAIN G. R. ELWES, J.P.
 THE REV. CANON J. C. M. MANSEL-PLEYDELL, M.A.
 THE REV. CANON MAYO, M.A. (*Dorset Editor of "Somerset and Dorset Notes and Queries"*).
 SIR DANIEL MORRIS, K.C.M.G., D.Sc., D.C.L., F.L.S.
 THE EARL OF MORAY, M.A., F.S.A. Scot., F.G.S.
 ALFRED POPE, Esq., F.S.A.
 E. R. SYKES, Esq., B.A., F.Z.S. (*Past Pres. Malacological Society*).
 HIS HONOUR J. S. UDAL, F.S.A.

Executive Body :

NELSON M. RICHARDSON, Esq., B.A. (*President*).
 The Rev. HERBERT PENTIN, M.A. (*Hon. Secretary*), St. Peter's Vicarage, Portland
 Captain JOHN E. ACLAND, M.A., F.S.A. (*Hon. Treasurer*), Wollaston
 House, Dorchester.

Hon. Editor :

HENRY SYMONDS, Esq., F.S.A., Roundham, Bridport.

Publication Committee :

The EXECUTIVE, The HON. EDITOR, H. B. MIDDLETON, Esq.,
 Dr. COLLEY MARCH, and E. R. SYKES, Esq.

Sectional Committees :

Dorset Photographic Survey—

The MEMBERS of the EXECUTIVE BODY <i>ex officio</i> C. J. CORNISH BROWNE, Esq. Colonel and Mrs. W. D. DICKSON (Hon. Directors) The Rev. S. E. V. FILLEUL, M.A.	Dr. E. K. LE FLEMING C. H. MATE, Esq. A. D. MOULLIN, Esq. Miss HILDA POPE The Rev. J. RIDLEY
---	--

Earthworks—

Captain J. E. ACLAND (Chairman) CHAS. S. PRIDEAUX, Esq. (Corres- ponding Secretary) The PRESIDENT F. E. ABBOTT, Esq. J. G. N. CLIFT, Esq. The Rev. W. O. COCKRAFT, B.A.	H. LE JEUNE, Esq. Lieut.-Colonel F. G. L. MAINWARING VERE L. OLIVER, Esq. ALFRED POPE, Esq., F.S.A. W. DE C. PRIDEAUX, Esq., F.S.A. The Rev. W. RHYDDERCH Miss E. E. WOODHOUSE
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Numismatic—

H. SYMONDS, Esq., F.S.A. (Corres- ponding Secretary) Captain JOHN E. ACLAND, F.S.A. Captain G. R. ELWES Lieut.-Colonel F. G. L. MAINWARING	Canon J. C. M. MANSEL-PLEYDELL, M.A. W. DE C. PRIDEAUX, Esq., F.S.A. H. F. RAYMOND, Esq.
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Restored Churches—

The Rev. A. C. ALMACK, M.A. (Corresponding Secretary) J. ALLNER, Esq., A.R.I.B.A. R. BARROW, Esq. H. W. CRICKMAY, Esq. The Rev. JAMES CROSS, M.A. Rev. Canon FLETCHER, M.A., R.D.	G. W. FLOYER, Esq. The Rev. H. HAWKINS R. HINE, Esq. The Rev. Canon MAYO, M.A. W. B. WILDMAN, Esq., M.A. The Rev. A. C. WOODHOUSE
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List of Members

OF THE

Dorset Natural History and Antiquarian Field Club.

FOR THE YEAR 1916.

Honorary Members :

Year of

Election. (The initials "O.M." signify "Original Member.")

- O.M.** W. CARRUTHERS, Esq., Ph.D., F.R.S., F.G.S., F.L.S., British Museum
(Nat. Hist.), South Kensington.
- 1889 A. M. WALLIS, Esq., 29, Mallams, Portland.
- 1900 A. SMITH WOODWARD, Esq., LL.D., F.R.S., F.G.S., British Museum (Nat.
Hist.), South Kensington, London.
- 1904 Sir WM. THISELTON DYER, K.C.M.G., C.I.E., LL.D., Sc.D., Ph.D.,
F.R.S., The Ferns, Witcombe, Gloucester.
- 1904½ Sir FREDERICK TREVES, Bart., G.C.V.O., C.B., LL.D., Thatched House
Lodge, Richmond Park, Kingston-on-Thames.
- 1908 THOMAS HARDY, Esq., O.M., D. Litt., LL.D., Max Gate, Dorchester.

Members :

- 1903 The Most Hon. the Marquis of
Salisbury, M.A., C.B. The Manor House, Cranborne
- 1903 The Most Hon. the Marchioness
of Salisbury The Manor House, Cranborne
- O.M.** The Right Hon. the Earl of
Moray, M.A., F.S.A. Scot.,
F.G.S. (*Vice-President*) Kinfauns Castle, Perth, N.B
- 1911 The Right Hon. the Earl of
Ilchester Melbury, Dorchester

- 1902 The Right Hon. the Earl of Shaftesbury, K.C.V.O. St. Giles, Wimborne
- 1884 The Right Hon. Lord Eustace Cecil, F.R.G.S. (*Vice-President*) Lytchett Heath, Poole
- 1903 The Right Hon. Lady Eustace Cecil Lytchett Heath, Poole
- 1904 The Right Rev. the Lord Bishop of Durham, D.D. Auckland Castle, Bishop's Auckland
- 1892 The Right Rev. the Lord Bishop of Worcester, D.D., F.S.A. Hartlebury Castle, Kidderminster
- 1912 The Right Rev. the Lord Bishop of Salisbury, D.D. The Palace, Salisbury
- 1889 The Right Hon. Lord Digby Minterne, Dorchester
- 1907 The Right Hon. Lord Wynford Warmwell House, Dorchester
- 1907 The Right Hon. Lady Wynford Warmwell House, Dorchester
- 1910 Abbott, F. E., Esq. Shortwood, Christchurch, Hants
- 1893 Acland, Captain John E., M.A., F.S.A. (*Vice-President and Hon. Treasurer*) Wollaston House, Dorchester
- 1892 Acton, Rev. Edward, B.A. Wolverton Rectory, Basingstoke
- 1907 Allner, Mrs. George National Provincial Bank, Sturminster Newton
- 1908 Almack, Rev. A. C., M.A. The Rectory, Blandford St. Mary
- 1906 Atkins, F. T., Esq., M.R.C.S., L.R.C.P. Edin. Cathay, Alumhurst Road, Bournemouth
- 1907 Atkinson, George T., Esq., M.A. Durlston Court, Swanage
- 1902 Baker, Sir Randolph L., Bart., M.P. Ranston, Blandford
- 1912 Baker, Rev. E. W., B.A. The Rectory, Witchampton
- 1906 Bankes, Mrs. Kingston Lacy, Wimborne
- 1912 Bankes, Jerome N., Esq., F.S.A. 63, Redcliffe Gardens, London, S. W.
- 1902 Barkworth, Edmund, Esq. Hillymead, Seaton
- 1904 Barlow, Major C. M. Southcot, Charminster
- 1894 Barnes, Mrs. John Iles Blandford
- 1917 Barrett, W. E. Cowdell, Esq., M.A., LL.M. The Cottage, Weymouth
- 1906 Barrow, Richard, Esq. Sorrento House, Sandecotes, Parkstone
- 1895 Bartelot, Rev. R. Grosvenor, M.A. Fordington St. George Vicarage, Dorchester
- 1904 Baskett, Mrs. S. R. Evershot
- 1913 Bassett, Rev. H. H. Tilney, R.D. (*Hon. Editor of the Dorset Rainfall Reports*) Whitchurch Vicarage, Blandford
- 1910 Baxter, Lieut.-Colonel W. H. The Wilderness, Sherborne

- 1910 Baxter, Mrs. W. H. The Wilderness, Sherborne
- 1917 Beament, W. O., Esq., B.A. Beaminster
- 1888 Beckford, F. J., Esq. Witley, Parkstone
- 1908 Benett-Stanford, Major J.,
F.R.G.S., F.Z.S. Hatch House, Tisbury, Wilts
- 1910 Blackett, Rev. J. C., B.A. Compton Rectory, Winchester
- 1917 Blathwayt, Rev. F. L., M.A.,
M.B.O.U. Melbury Osmond Rectory, Dorchester
- 1903 Bond, Gerald Denis, Esq. Holme, Wareham
- 1906 Bond, Nigel de M., Esq., M.A. Hasler House, Crowborough, Sussex
- 1903 Bond, Wm. Ralph G., Esq. Tyneham, Wareham
- 1910 Bond, F. Bligh, Esq., F.R.I.B.A. 454, Gloucester Road, Bristol
- 1913 Bone, Clement G., Esq., M.A. 6, Lennox Street, Weymouth
- 1889 Bower, H. Syndercombe, Esq. Fontmell Parva, Shillingstone, Blandford
- 1900 Bower, Rev. Charles H. S.,
M.A. Childe Okeford Rectory, Shillingstone,
Dorset
- 1898 Brandreth, Rev. F. W., M.A. Buckland Newton, Dorchester
- 1901 Brennand, John, Esq. Innisfallen, Rossmore Avenue, Parkstone
- 1895 Brymer, Rev. J. G., M.A. Ilsington House, Puddletown
- 1907 Bulfin, Ignatius, Esq., B.A. The Den, Knole Road, Bournemouth
- 1900 Bullen, Colonel John Bullen
Symes Catherston Leweston, near Charmouth
- 1907 Bury, Mrs. Henry Mayfield House, Farnham, Surrey
- 1905 Busk, W. G., Esq. Wraxall Manor, Cattistock, Dorchester
- 1905 Busk, Mrs. W. G. Wraxall Manor, Cattistock, Dorchester
- 1901 Bussell, Miss Katherine Thorneloe School, Rodwell, Weymouth
- 1903 Butler-Bowden, Mrs. Bruno Upwey House, Upwey
- 1911 Butlin, M. C., Esq., M.A. 7, Westerhall Road, Weymouth
- 1891 Carter, William, Esq. The Hermitage, Parkstone
- 1905 Chadwyck-Healey, Sir C. E. H.,
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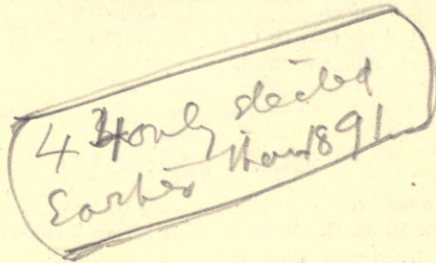
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BRITISH MUSEUM OF NATURAL HISTORY, SOUTH KENSINGTON, LONDON.

BRITISH ASSOCIATION, BURLINGTON HOUSE, LONDON.

CAMBRIDGE PHILOSOPHICAL SOCIETY, CAMBRIDGE.

DEVONSHIRE ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, LITERATURE, AND ART (THE HON. GENERAL SECRETARY, CARE OF MESSRS. W. BRENDON AND SON, PLYMOUTH).

ESSEX MUSEUM OF NATURAL HISTORY, STRATFORD, ESSEX.

GEOLOGICAL SOCIETY OF LONDON, LONDON.

HAMPSHIRE FIELD CLUB (CARE OF MESSRS. GILBERT, SOUTHAMPTON).

NATIONAL LIBRARY OF WALES (LLYFRGELL GENEDLAETHOL CYMRU), ABERYSTWYTH.

ROYAL SOCIETY OF ANTIQUARIES, DUBLIN, IRELAND.

SOCIETY OF ANTIQUARIES, LONDON.

SOMERSET ARCHÆOLOGICAL AND NATURAL HISTORY SOCIETY, TAUNTON CASTLE, TAUNTON.

UNIVERSITY LIBRARY, CAMBRIDGE.

WILTSHIRE ARCHÆOLOGICAL AND NATURAL HISTORY SOCIETY, DEVIZES.

The Proceedings

OF THE

Dorset Natural History and Antiquarian Field Club.

(FROM MAY, 1915, TO MAY, 1916.)

In consequence of the War no Summer Meetings were held
in the Year, 1915.

WINTER SESSION, 1915-16.

The first meeting of the session was held at the Dorset County Museum on Tuesday, 7th December. The President, Mr. NELSON M. RICHARDSON, occupied the chair, and was supported by Lord Eustace Cecil, the Rev. H. Pentin, Captain J. E. Acland, Captain G. R. Elwes, and Mr. Alfred Pope.

The HON. SECRETARY announced the nomination of four candidates for election as members of the Field Club. The ballot would take place at the meeting in February then next.

Sir DANIEL MORRIS had attended the meeting of the British Association at Manchester as the delegate of the Club, and had forwarded the official report of the meetings held by the Corresponding Societies, which ran as follows :—

CORRESPONDING SOCIETIES AT THE BRITISH ASSOCIATION.

The first meeting of the Conference of Delegates was held on Sept. 8th, and it was announced that the General Committee of the British Association had altered the titles of officers of the Conference from Chairman and Vice-Chairman to President and Vice-President, thereby giving them the same status as those of the Sections. Sir Thomas

Holland delivered his opening address, entitled "The Classification of Scientific Societies," which was printed in "Nature" of September 16th.

The first subject for discussion was "Local Museums," suggested by the Selborne Society, and introduced by Dr. W. E. Hoyle. He laid it down that the first and fundamental function of a museum was to preserve. Museum officials are nowadays given so much advice about the desirability of making our exhibits æsthetically attractive, of compiling explanatory labels which shall at the same time instruct the specialist and interest the casual visitor, and of catering for school children, that they are, he said, in danger, perhaps, of forgetting that their paramount duty is to see that "neither moth nor rust doth corrupt" and that "thieves do not break through nor steal."

He gave a definition of a local museum, the first duty of which, he maintained, was to preserve the things of interest pertaining to the locality. Then he touched upon the important and delicate question of the relations which ought to exist between the local museum and the national museum. Difficulties arose when it was required to determine in particular cases what objects were of national importance and should be preserved in a national museum.

After the first function of a local museum had been adequately discharged, Dr. Hoyle thought that, if means and opportunities allowed, collections should be provided which gave the visitor a preliminary sketch of some department of knowledge. He alluded to "index" collections, though he thought the term "introductory" collections would be more appropriate. Dr. Hoyle had something to say with regard to the coming into touch of the museum with the educational system of the locality; and he saw nothing out of place in a local museum developing a special subject quite disconnected with the locality if it had the power to do so without interfering with its proper work.

In the discussion which followed, Dr. Bather touched upon principles which should guide local curators in their selection of what should be considered of national and local interest. Type specimens should be placed in museums where they would be well looked after. Moreover, researchers, though they would naturally seek for local objects, such as fossils, in a local museum, ought not to have to look for, say, New Zealand fossils, through all the museums of the British Isles.

Dr. Marie C. Stopes thought that there might be a balance of good in decentralising collections, even of type specimens; for the visiting of local museums brings a stimulus to the local people, and widens and humanises the interests of specialists.

It seemed evident from other remarks that if local museums are to be properly educational, in the general sense of the word, there should be special institutions or special sections of existing museums with their own organisation, so as not to burden curators unduly.

Prof. Geddes directed attention to the survey of Greater London now being carried out by the Architects' War Committee, which deserved the co-operation of museums and natural history societies.

The second meeting was held on Friday, September 10th. As a result of the importance of the presidential address, and the interest which had been taken in its suggestions, the vice-president, Mr. William Whitaker, moved a resolution in the following terms:—"That this conference invites the attention of the Corresponding Societies' Committee to the President's opening address, in which suggestions are made for reforming the existing, varied, and unorganised practice of publishing original papers." An outline was given of ways in which this might be done, and the resolution was carried.

The second subject for discussion was "Colour Standards," suggested by the British Mycological Society, and introduced by Mr. J. Ramsbottom. He described and illustrated a number of the schemes which had been formulated with the object of obtaining some uniformity of colour description in the many branches of natural science. Recent attempts at colour standards have each something against their general adoption, and, except for horticulturists, mycologists, and possibly ornithologists, they are much too full. It would seem best to have a well-arranged list of two hundred well-named colours for ordinary use, which colour scheme could be amplified in those branches of science where needed.

In this case, also, a good discussion was aroused, and as it was pointed out that the work of preparing such a series of colour standards for scientific and commercial uses, though of interest to many of the committees of the Association, was not the province of any one of them, a resolution was passed referring the matter to the Corresponding Societies' Committee.

In many ways the Conference of Delegates at Manchester was the most successful that had been held in this country for a considerable time.

The report of the Earthworks Committee of the Congress of Archæological Societies was laid upon the table, but it contained nothing relative to Dorset. Copies had been circulated among the members of the Club. In this connection Captain ACLAND mentioned that reports had been made to him as to probable damage to ancient earthworks near Blandford, but he had been assured by the officer in command of the troops that the greatest care would be taken and that anything found would be preserved.

The PRESIDENT read a letter from the Mayor of Bournemouth inviting the assistance of the Club on the occasion of the visit of the British Association to that town in 1917. It was resolved to render all assistance that was possible.

Mr. W. de C. PRIDEAUX had written to call attention to a pre-Reformation altar-slab which was built into the south wall of the church-yard at Broadmayne, and to suggest that the Club should give financial help towards removing the slab from its present position. Mr. C. E. PONTING, the diocesan surveyor, had also written to the same effect, saying that he had first noticed the stone about five years previously. The HON. SECRETARY observed that it was believed there were only four pre-Reformation stone altar-slabs in Dorset, namely, at Arne, Bere Regis, Corton and Stock Gaylard, and all of them were now used for their original purpose. It was decided that the Executive should communicate with the Rector of Broadmayne and that a grant in aid should be made.

The PRESIDENT then referred to the delay in the production of the volume of Proceedings which was due in July, 1915. He had been informed by the printers that the absence of many men on military service had necessarily hindered the work. A discussion followed, in which suggestions as to the future were made, but the general feeling was that under the existing circumstances the delay was unavoidable.

The HON. SECRETARY mentioned that Canon C. H. Mayo had consented to act as general receiver of the reports on restored churches in Dorset.

Mr. W. PARKINSON CURTIS had written to the President saying that the statutory rules and order of 1915 (No. 909) had created a protected area of considerable extent in the Trough of Poole and had made additions to the list of birds protected in the surrounding district. Mr. Curtis and other ornithologists thought that it was desirable to appoint a watcher for the newly protected area, as shooting had practically ceased; but the meeting was unable to suggest a suitable person.

EXHIBITS.

By the President (1) A copy of Tyndale's New Testament, 1536, known as "the mole" edition. Three editions were published in that year, and they may be distinguished by the stone in the woodcut of St. Paul at the beginning of several Epistles. On one stone there is engraved an animal generally accepted as a mole; on another, the surface is not engraved, this variety being known as the "blank stone" edition; on the third, there are the letters A.B.K. in monogram, whence it is known as the "engraver's mark" edition. The first edition of Tyndale's New Testament was issued in 1525, and is represented in the British Museum by a fragment of 31 leaves which were printed in Cologne, but Tyndale was forced to fly before his work was finished. The second edition was probably printed by Peter Schoeffer at Worms in 1525, and is represented by a fragment at St. Paul's and by a copy at Bristol which is complete except for the title. (A facsimile of the Bristol copy was sent for exhibition by Mr. A. N. Stephens.) A title page, but nothing more, exists of the third edition in 1532, and there are copies extant of 1534 and 1535; indeed, it is quite possible that there were other issues before "the mole" edition. The woodcuts which illustrate "the mole" edition of 1536 are very remarkable, especially those in Revelation. The latest issue of Tyndale's translation was in 1566.

(2) A finely engraved helmet of the sixteenth century, said to be of Spanish origin.

By Captain Elwes—A "Venetian dog," or pistol, of the period 1650-80.

By Mr. E. A. Rawlence—Objects connected with a prehistoric burial recently found in Low Hill quarry, Nether Compton, Sherborne, consisting of flint flakes, a boar's tooth, a roe-deer horn, &c. Captain Acland thought that the interment probably belonged to the Bronze Age.

By Mr. Alfred Pope—A bond for £2,500 given by the fourth Marquis of Winchester, who had embarrassed his

estate by extravagance and the lavish entertainment of Queen Elizabeth at Basing House. The document pledged the farm, &c., of Portesham.

By Captain Acland—A Bradshaw's railway map of 1851, showing the South Western railway with its terminus at Dorchester. At that date there was no line to Weymouth, as the Great Western railway did not extend beyond Frome.

PAPERS.

Mr. RAWLENCE read a paper on Folk-lore reminiscences concerning man and beast in Dorset.

Canon Fletcher told the history of "The man in the wall" at Wimborne Minster.

Captain Acland read selections from his notes on Mr. E. Cunnington's records of barrows opened in Dorset between 1879-1890.

Mr. L. Richardson's paper on the stratigraphical distribution of inferior-oolite vertebrates was read in part by the President.

The four papers are printed on later pages of this volume.



SECOND WINTER MEETING.

Tuesday, 8th February, 1916.

The President, Mr. NELSON M. RICHARDSON, took the chair, and among those present were Lord Eustace Cecil, the Rev. H. Pentin, Captain J. E. Acland, Mr. Alfred Pope, and Sir Daniel Morris.

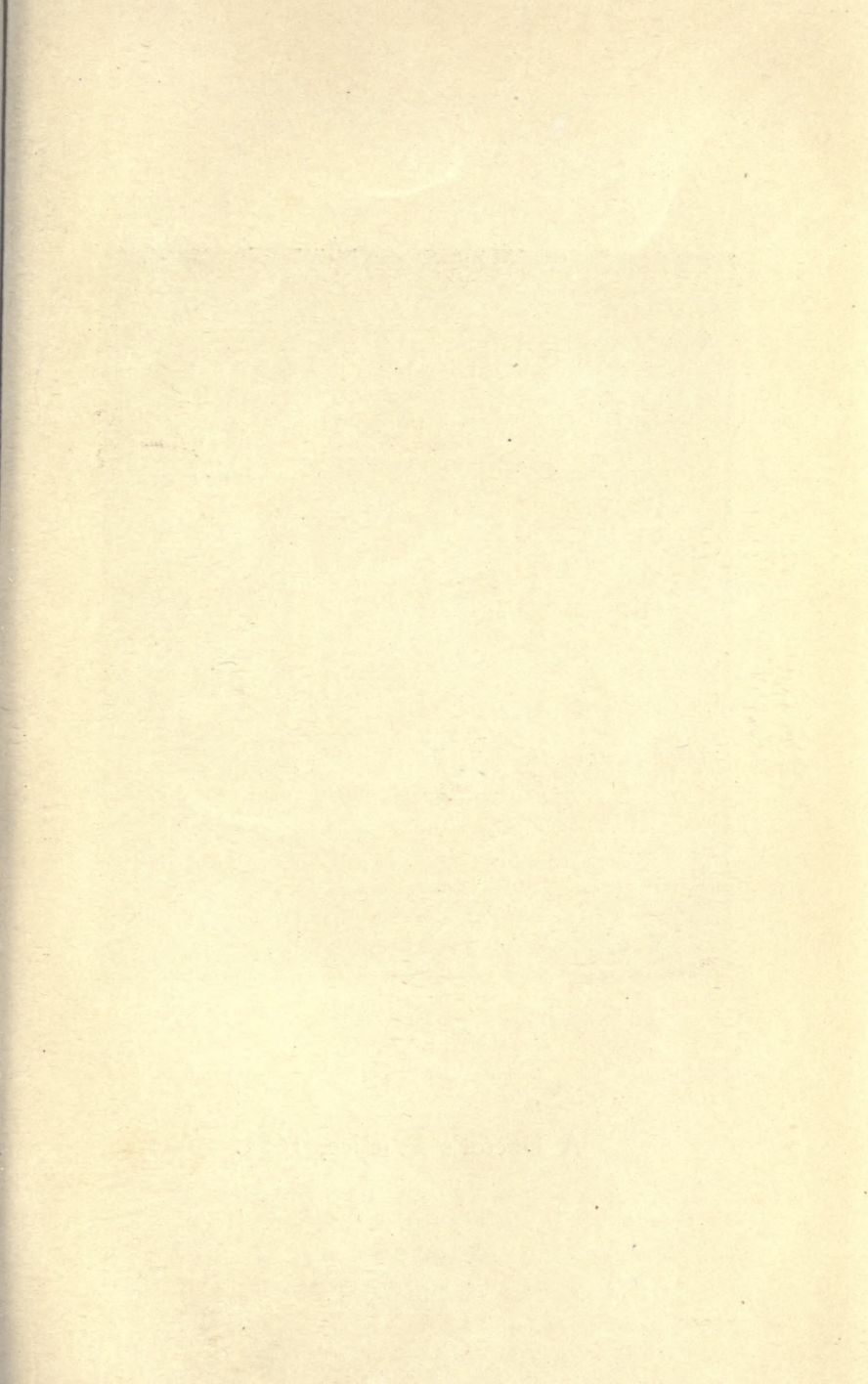
Four candidates, who had been proposed at the previous meeting, were balloted for and declared to be elected.

One nomination for membership was announced.

It was decided that £2 15s. should be contributed to defray the cost of the removal of the altar-slab at Broadmayne from its present position of danger. The subject had been discussed at the first meeting of the winter session, and the Rector of Broadmayne had written to say that the stone would be placed within the church porch.

The President invited expressions of opinion as to whether the outdoor meetings should be resumed during the coming summer, and added that the executive were in favour of a postponement of such meetings until after the end of the war. Lord Eustace Cecil concurred in this view. Mr. E. S. Rodd hoped that when the outdoor meetings were resumed the Field Club would again visit Chardstock and the neighbourhood of Forde Abbey. At the suggestion of Mr. Alfred Pope it was agreed to defer the question of postponement until the general meeting in May.

It was resolved to transfer to the library of Sherborne School four documents concerning the endowments of the school, which had been found in the collection of papers relative to the silk industry. A letter of thanks for the gift has since been received from Mr. W. B. Wildman.





A Doctor's Practice, 1623.

EXHIBITS.

By Captain Acland—a manuscript by William Barnes, entitled “Edge Tools in Early Britain,” which had been presented by Canon Mansel-Pleydell to the Dorset County Museum. The manuscript will be printed in full on a later page of this volume.

By Mr. Henry Symonds. (1) A photograph of a carved oak panel, dated 1623, representing incidents in a doctor’s practice. This panel, which is reproduced in the annexed plate, was formerly owned by a medical man at Poole and had been in the possession of his family for eighty years, during which time they had lived in that town. It was bought in the “seventies” by Mr. William Fenwick, of Arlington, New Jersey, U.S.A., who sold it through an agent to an unknown purchaser. Since the foregoing note was written the editor has been informed that the original panel was acquired by the Royal College of Surgeons and is now in their house in Lincoln’s Inn Fields. (2) A little booklet containing six stanzas written by William Barnes in 1872 “for the benefit of the Bridport School of Art.” The lines are now reprinted as they do not appear in the collected editions of the poet’s works. The exhibited copy—given to Mr. Symonds by our member, Mr. J. T. Stephens,—contains a contemporary photograph of the ship-building yard, from which the last new vessel was launched in 1879.

“BRIDPORT HARBOUR.”

Hill-warded haven, creek well found
To sailors on thy stormy shore;
When 'midst the waters' deaf'ning roar
They step on this thy peaceful ground,
As blest with happy homes at hand
Or strangers on a foreign land.

2.

As softly sinks from fear to rest
The hunted stag, at last hound free,
The ship that ploughs the stormy sea
Here stills her billow-beaten breast
And yields her welcome freight, to fill
Her hold with works of Bridport skill.

3.

Here, fair from ev'ry shipwright's tool,
The new ship plunges from the stocks
And chafes her first white foam ; and rocks
On heaving waters of thy pool,
Now soon to waft her crest in hope
O'er longsome tracts of sea-wide scope.

4.

The birds,*¹ where lay Prometheus bound,
Still ate with everlasting bills
His growing lungs, and these two hills*²
So yield to eating waves their ground
That wastes in this receding shore,
But wastes, alas, to grow no more.

5.

How many untold years have run
Since those two now half-hills were whole,
And man beheld the waters roll
Where they sank, grassy to the sun,
Long ere the sea had cast the sand
And far-borne pebbles on this strand.

*¹ The Eagles. See the *mythos* of Prometheus.

*² The east and west cliffs.

6.

May ev'ry ship that commerce sends
From thee, O peaceful little creek,
Come back full-rigged, without a leak,
With men to wives and friends to friends ;
May Heaven speed both to and fro
All ships that here may come and go.

WM. BARNES.

29 July, 1872.

By the Rev. E. F. Linton—(1) A small holy-water stoup of white marble, found at Westworth, in the parish of Edmondsham. (2) A pipe-stopper mounted on a medallion bearing the portraits of Charles I. and Henrietta Maria, found at Edmondsham.

By Mr. G. S. Fry—A manuscript volume of sermons preached by Aldrich Swan between 1686 and 1694, when he was minister of Kington Magna and Wimborne Minster. The Hon. Secretary said that he had read the sermons with much appreciation, but as Greek, Latin, and the early Fathers were freely quoted he feared that the discourses were over the heads of the congregations. Aldrich Swan was one of the three ministers of Wimborne who signed the receipt for the books given by William Stone to the Minster library (*cf.* S. and D. N. and Q. xv., 11).

By the President—Some little flowers given to him by Lieutenant Chaytor, of the Canterbury Mounted Rifles, New Zealand, who had picked them on Lallababa Hill, Gallipoli, in May, 1915. Sir Daniel Morris remarked that the flower looked like a hairy-leaved vetch.

Two eighteenth-century deeds relating to land in Bingham's Melcombe, which had been presented to the Field Club by Mr. A. W. Marks, of Gray's Inn, W.C.

PAPERS.

Sir Daniel Morris read a paper on Australian trees and shrubs acclimatised on the south coast, and illustrated

his lecture with many specimens in flower or in fruit, some of which had been kindly sent by Lord Ilchester from his sub-tropical garden at Abbotsbury.

Captain Acland read extracts from a paper by Mr. Henry Symonds on the silk industry in Wessex, more particularly in Sherborne, during the eighteenth century. The Field Club's collection of books, deeds, and papers relating to the subject was laid upon the table.

The President read a portion of the paper by Mr. E. W. Swanton on Dorset land-shells in the museum at Haslemere.

The Rev. O. Pickard-Cambridge had been unable to finish his paper on new and rare Arachnida noted in 1915, and therefore it was taken as read.

Mr. W. de C. Prideaux discussed the Mohun brasses in the old church at Fleet, and illustrated his notes with a series of rubbings.

The foregoing papers are printed on subsequent pages of this volume.*

* At a later date Mr. Pickard-Cambridge found it impossible, owing to ill health, to complete his notes on Arachnida; consequently the printing of the paper is postponed until next year.

ANNUAL BUSINESS MEETING.

Tuesday, 9th May, 1916.

This meeting was held as usual at the Dorset County Museum, the President, Mr. Nelson M. Richardson, being in the chair.

One candidate was elected by ballot, and two additional nominations for membership were read.

Mr. Richardson then delivered his presidential address, which is printed at p. 1 of the second portion of this volume.

Captain Elwes moved that a hearty vote of thanks be given to the President for his excellent address, which embraced much valuable knowledge set forth in a very lucid manner. Mr. Alfred Pope seconded the proposal and it was adopted amid applause.

The Hon. Secretary read the report, which ran as follows :

There is less than usual to report this year, as owing to the war there were no Summer Meetings in 1915. The difficulty of obtaining motors and brakes, the uncertainty of the train-service in Dorset owing to the movement of troops, together with sentimental reasons, doubtless influenced the members in their decision to abandon summer excursions. The usual meetings were held in the winter, but the attendance has been unusually small. The war is, without doubt, responsible for this, as also for the fall in our membership. We now have slightly less than 350 members.

As there were no receipts in the Hon. Secretary's accounts last year, owing to there being no summer meetings, there is now only a small balance in hand of 4s. 6d.

The Hon. Treasurer read the audited statement of accounts for the year ending 31st December, 1915. The financial position was satisfactory—the balance in hand being £71 11s. 9d. as against £39 11s. 4d. at the end of 1914. The accounts, together with that of the Hon. Secretary, are printed on the adjoining pages.

The report of the Hon. Editor as to the contents of vol. xxxvii, for 1916 was read. The members of the Field Club were indebted to Mrs. Merrick-Head for kindly providing the photographs and blocks used for reproducing the eighteen old views of Portland, and to Canon Fletcher for giving two blocks and the plates to illustrate his paper on "The man in the wall at Wimborne Minster." The photographs for the last named blocks were taken by Dr. E. K. le Fleming.

Colonel and Mrs. Dickson were not able to report any progress with the Dorset Photographic Survey, as photography had ceased in consequence of the war.

The Earthworks Sectional Committee and the Restored Churches Committee were unable, for similar reasons, to make any reports.

The Numismatic Sectional Committee sent a short report by Mr. Henry Symonds—

A few years ago a small hoard of Anglo-Saxon coins was found in the county, but the precise locality was not disclosed for certain reasons. A description of the find and a plate of the coins have been sent by me to the Dorset County Museum library, through the kindness of the author of the paper which appeared in *Numismatic Chronicle*, 4 Ser. Vol. xv., p. 336. None of the coins were struck in Dorset mints, so far as our present knowledge teaches us. The practice of placing the name of the town on the reverse of the coin was not adopted until later in the Saxon period than the date of this hoard.

Captain Acland, as curator of the Dorset County Museum, read the following notes on the objects acquired by the Museum between May, 1915, and May, 1916 :—

During the past twelve months we have had many additions to the various collections which need not be described individually. Some other acquisitions have been exhibited and reported upon at the winter meetings of the Field Club, and I will not therefore refer to them again. In a different category, however, is the fine collection of corals presented by Mrs. Merrick Head from Pennsylvania Castle, Portland. I am informed that they were bought by her husband about the year 1872 at a sale of the property of Mr. Wilson Saunders of Reigate. Mrs. Head has not only given this beautiful collection to the Museum, but has

defrayed the whole expense of the removal from Portland and provided the three new cases in which they are exhibited.

We have also acquired by the gift of Sir George Meyrick, Bart., through the good offices of Mr. Henry Symonds, 25 British bronze coins, a portion of those found during the excavations at Hengistbury Head in 1911-1912. They are stated by Mr. Bushe-Fox in the Report of the Society of Antiquaries to be of a type of exceptional interest, as it represents the very last stage of the gold stater of Philip II. of Macedon, the head and chariot having become nothing but meaningless dots and lines. Nearly 3,000 pieces were found, and were subsequently examined by Mr. G. F. Hill, of the British Museum, who described them as being partly of the usual "South Western" *struck* class, and partly of the peculiar *cast* class, now called the "Hengistbury" class, many of which remained in mint condition. In some parts of the settlement masses of coins, numbering 600 or 700, were found together, and had evidently been deposited in bundles, possibly wrapped in basket work, and it is therefore suggested that they were minted on the spot.

In view of the sad loss we have all sustained by the death of our much respected and talented friend, Dr. Colley March, I must refer at rather greater length to his last gift to the Museum. Within a very few days of his death he sent to me a collection of bone, flint, and bronze objects, and also broken pottery, which he had himself found near Portesham, and which he considered a proof that the site had been occupied by succeeding races through many centuries. I cannot do better than give, in his own words, the notes that accompanied his gift, so that they may be recorded in the *Proceedings*.

"At a distance of exactly six furlongs due west of St. Peter's Church, Portesham, there is a deep valley hollowed by running water called 'Springs;' it is marked as it descends by a number of 'Vents,' through which this water, as it gradually became subterranean, used to escape. But the valley now is dry until its lower part is reached, where the water, unable to penetrate a bed of clay, is turned out, and flows on to the Fleet.

In former days, when streams flowed from the Vents, this valley was a good place for sheep-folds and cattle pens, and, under a favourable light, there can be seen on its sloping sides, the lines of ancient enclosures.

To the west of this valley there is a wide shelf of meadow land, 350ft. above the sea, protected from the North by the slope which rises to a height of 600ft.

On this charming spot, about 15 years ago, a gamekeeper's house was built, and when the preliminary trenches 1½ft. deep were made, I carefully inspected them and the excavated earth. I discovered evidence that this very site had been selected for a dwelling-place all through

the ages, from early neolithic to late Romano-British times. Chert, flint, and perhaps good Portland stone chert from the Chesil-bank—bone, bronze, and iron—had all been used in the making of implements now indeed broken, while potsherds abound of every corresponding period. Many of the flakes and several of the pieces of bone show signs of use.

A bone implement, a saw of chert, an iron rod or pin (that I have varnished to check the corrosion of rust), and four small implements respectively of bone, flint, horn, and bronze (but all of them broken), I have fastened to a card."

The whole collection is now presented to the Museum.

The President announced that the Mansel-Pleydell medal and prize had been awarded to Miss Ellen E. Woodhouse, of Chilmore, Ansty, for her essay on pre-Saxon civilisation in Dorset. Mr. Richardson then presented the medal and congratulated the successful competitor. Miss Woodhouse's essay is printed in this volume.

The question of holding the summer meetings had been postponed from the 8th February to this meeting. It was now proposed by Mr. Richard Barrow, and seconded by Captain Acland, that no out-door meetings be held during 1916. This resolution was carried.

The Hon. Secretary reported that the Rector of Broadmayne had written to him saying that the stone altar-slab had been safely placed in the church porch.

The Rev. A. C. Woodhouse proposed and the Rev. H. Hawkins seconded a resolution that the Club deprecated the laying flat of old tomb stones which were intended to be upright, as that practice tended to a rapid obliteration of the inscriptions. The resolution was adopted.

ELECTION OF OFFICERS AND COMMITTEES.

Mr. F. E. Abbott proposed that the President, the Hon. Secretary, the Treasurer, and the Editor should be re-elected to their respective offices. This was seconded by Mr. R. Barrow and approved by the meeting. The Hon. Secretary again nominated Mr. H. Pouncy as Assistant Secretary.

The Sectional Committee of the Dorset Photographic Survey was re-elected.

The Earthworks Committee was also re-elected, with the addition of Captain Acland and Mr. F. E. Abbott.

Captain Elwes was added to the Numismatic Committee, which was re-elected.

The Rev. H. Hawkins, Mr. R. Barrow, and Mr. G. W. Floyer were added to the Restored Churches Committee, which was re-elected.

The President nominated, for the ensuing year, the retiring Vice-Presidents, with the addition of Sir Daniel Morris in place of the late Dr. Colley March.

Mr. Alfred Pope was asked to act as the delegate of the Field Club at the meeting of the British Association at Newcastle-on-Tyne.

Mr. Nigel Bond and Mr. E. A. Fry were nominated as representatives of the Club at the Congress of Archæological Societies in union with the Society of Antiquaries of London, if the Congress met in 1916.

It was announced that the Cecil medal and prize would be awarded in May, 1917, for the best paper on "The more recent applications of electricity in the present war, especially in the treatment of diseases and wounds arising therefrom," and that the Mansel-Pleydell medal and prize would be awarded in May, 1918, for the best paper on "The Kimmeridge clay of Dorset and its industrial uses, past, present, and future."

Dorset Natural History and Antiquarian Field Club.

TREASURER'S ACCOUNT FOR THE YEAR ENDING DECEMBER 31st, 1915.

xliv.

RECEIPTS.		£	s.	d.	Engraving Blocks—		PAYMENTS.	£	s.	d.
Balance brought forward from 1914	..	39	11	4	The Complete Press	..	..	2	0	5
Members' Subscriptions	..	181	2	6	Artists' Illustrators Ltd.	..	..	6	13	0
New Members, Entrance Fees, and Subscriptions..	..	4	0	0	<i>Sime and Co.—</i>					
Dividends on £500 2½ p.c. Consols (9 months)	..	8	6	9	Printing and Binding 400 copies					
					Vol. 36 (1915)	..	..	101	1	6
					Postage, Wrappers, Labels, Cards	..	..	9	6	0
					Authors' Copies, Lists of Mem-	..	..	8	6	6
					bers, and Postages	..	..	
					Programmes of Meetings, Ad-	..	..	15	17	6
					dressing, &c.	..	..	1	5	0
					Advertisements of Meetings	..	..	0	16	0
					Rainfall Register Forms	..	..	0	18	6
					Rainfall Reports	..	..	1	0	6
					Stationery and Printing	..	..	
								£138	11	6
					Less refund	..	..	0	11	0
					<i>Subscriptions to Societies—</i>			138	0	6
					National Trust	..	..	1	1	0
					Archæological and Copics Report	..	..	1	16	11
					Dewlish Excavation	..	..	2	2	0
					<i>Miscellaneous—</i>			4	19	11
					Cost of transfer of Consols	..	..	0	17	9
					Carriage of Books	..	..	0	5	10
					A. Kibbey, Storage of Vols. and	..	..	
					Postage	..	..	0	6	2
					Treasurer's Petty Cash and Post-	..	..	
					ages	..	..	1	9	8
					Treasurer's Assistant	..	..	5	0	0
					H. Ling, Printing and Stationery	..	..	1	13	1
					Cheque Book	..	..	0	2	6
								9	15	0
					Balance carried forward	..	..	71	11	9
								£233	0	7

April 3rd, 1916.—We certify that we have examined the fore-going statement of Account, and find the same correct.
(Signed) EDWARDS and EDWARDS, Incorporated Accountants, Cornhill Chambers, Dorchester.

Dorset Natural History and Antiquarian Field Club.

DR.

HONORARY SECRETARY'S ACCOUNTS: MAY, 1915, TO MAY, 1916.

CR.

1915.—	£	s.	d.
To Balance brought forward	5 6 0
1916.—			
By Assistant Secretary, Honorarium	5 0 0
„ Ditto, Postages	0 1 6
„ Balance in hand	0 4 6
			<hr/>
			£5 6 0

9th May, 1916.

HERBERT PENTIN,

Hon. Secretary.

Club Notes.

A MEDIAEVAL BURIAL CUSTOM IN DORSET.

Among the Middleton manuscripts at Wollaton Hall, Northamptonshire, is the probate of the will of Robert de Bingham, county Dorset, an abstract of which is appended:—

To be buried in the cemetery of St. Andrew of Tolr' (Toller) on the south side of the chancel of the same church, near the tomb of Nichole de Tornay, my wife, *et ante corpus meum unum bovem*.

Among the legacies are the following : For the fabric of the church of Tolr', 2s. ; to the lesser friars of Dorsetre (Dorchester), half a mark (6s. 8d.) ; to my chapel of Stafford, 4s. ; to Henry, rector of the church of Tolr', four spoons (*coclearia*) of silver, and to the same, one mark of silver. The rector to be one of the executors, with the testator's son Ralph and "Johanna de Raleghe, my wife."

Proved before the official of the Archdeacon of Dorset in the church of the Blessed Mary of Bridport *quinto kalendas Maii* (27 April) 1303. Administration granted to Henry, rector of Toller, and Ralph, two of the executors, Joan being released on account of weakness (Historical Manuscripts Commission Report).

The instructions to bury an ox before the body of the testator is so unusual as to be worth noting in these pages. The custom seems to be near akin to paganism and somewhat reminiscent of Hittite burial practices. Through the kindness of a friend at the Public Record Office, the puzzle was submitted to Mr. E. S. Hartland, of Gloucester, an authority

on folklore. In reply, Mr. Hartland said that the circumstances were very curious, as it was not a case of a favourite animal. He thought that it was probably a mediæval survival of an earlier stage of culture, but whether the ox was for food purposes or for carrying the deceased man on his long journey was a matter of conjecture.* The Germans used to bury cattle, or metal figures of them, with the dead. There was also a doubt as to the precise force of the preposition *ante*.

Three other points arise in connection with this will. There is, I think, no doubt that Great Toller, and not Toller Fratrum, is the place indicated, as the Bingham family held lands known as Wolcomb Bingham in the former parish from the days of Edward I. until those of Queen Victoria. If that is so, Henry, the rector of Great Toller, is the earliest known incumbent, as the first institution in Hutchins's list of rectors and vicars occurs in 1317. The patron saint of Great Toller church is generally stated to be St. Peter, but it should be noticed that the will mentions "St. Andrew." Hutchins quotes another official document dated in 1345-46, which also speaks of St. Andrew's church. For these reasons, therefore, it seems probable that the original dedication was not to St. Peter.

This will of 1303 is also interesting from the genealogical point of view, as the names of the testator's wives and son appear to be additions to the short pedigree of the Bingham family as set out by Hutchins. The notes attached to the pedigree confess that there is inextricable confusion in one section of the chart, due in part to the use of one and the same Christian name by successive generations. Perhaps the will of this Robert Bingham may solve at least one of the difficulties.

EDITOR.

*Notes and Queries, 7th Ser. V. 466 and VI., 73, Animal sacrifices at Christian burials.

A RARE SEVENTEENTH-CENTURY TOKEN OF SHERBORNE.

Obv.: Richard Pounsfoot—A castle with three towers ; in the centre a gateway.

Rev.: In Sherbon, 1667—^{P.}_{R.E.}

As far as I am aware, no other example of this little piece is at present known. The description in the list printed by Hutchins (3rd. ed.) gives the place-name as "Sherborne," and the castle is said to have two towers. When Mr. J. S. Udal wrote the Dorset section of the second edition of Boyne's text book he had not seen the token, and was therefore obliged to follow Hutchins's reading and description (Boyne, 2nd ed., p. 191, No. 171). Having regard to the rarity of this farthing it seems most probable that two distinct varieties were not struck, and that the specimen now described represents the tokens issued in Sherborne by the occupier of the Castle inn. I think that Hutchins examined, or heard of, a worn specimen which was partly illegible, hence his rendering of the legend on the reverse and of the architectural details on the obverse.

An inn with this sign in Long-street, near the Market Place, was advertised for sale in 1787 (*Western Flying Post*). Possibly it was the building occupied by Richard Pounsfoot in 1667.

EDITOR.

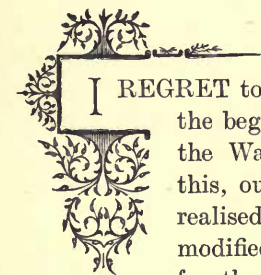




Anniversary Address of the President.

By NELSON MOORE RICHARDSON, Esq., B.A.

(Read May 9th, 1916.)



I REGRET to say that the hope that I expressed at the beginning of my Address a year ago that the War might have come to an end before this, our next Annual Meeting, has not been realised, and we have continued our work in a modified form by holding only indoor Meetings for the reading of papers. Though we have several of our younger members serving with our forces, I am glad to be able to say that so far they have all been spared to us, with the exception of Commander T. C. A. Blomefield, R.N., who died nobly fighting for his country in action in the Persian Gulf. His naval duties rarely left him free to attend our meetings, but both he and Mrs. Blomefield took great interest in Antiquarian matters, and I was always pleased to welcome them amongst us. And here I feel that whilst speaking of the War, I should like,

on behalf of the Club, to offer our sympathy to those of our members who have lost sons or near relatives, of whom I fear the list would be a long one, and I will mention no names, as I might omit some. Colonel J. Mount Batten, C.B., H.M. Lieut. for Dorset, is in our list stated to have joined the Club in 1909, but he was really a much older member, having been elected in 1888, but owing to absence abroad a break occurred in his membership. I recollect him in early days as a frequent and interested attendant at the meetings, and this interest he kept up to the last. One of the earliest meetings at which I was present was held at his house at Upcerne, when he entertained the Club, which hospitality he repeated a few years ago. Mr. W. Bowles Barrett was one of our older members, having joined in 1884, and has always been one of our leading botanists, as well as an authority on local history and records, both of Weymouth and the neighbourhood generally, and also on the biography of some of its more noted residents in former times. Numerous papers from his pen will be found scattered through our volumes, and it is much to be regretted that his professional work, especially of late years, left him so little time for the subjects which he delighted in. He had a large and valuable botanical collection. Mr. S. R. Baskett, of Evershot, joined in 1893, and, like his brother, who has also passed away from us, was much interested in the subjects which our Club embraces. I remember with pleasure our visit to his house in 1895, where he exhibited his collections and entertained the Club when we met at Evershot and Melbury. Mrs. Selina Aldridge, who joined in 1899, used to attend our meetings frequently. I have left to the last the greatest loss the Club has sustained, namely, that of our Vice-President, Dr. H. Colley March. Elected in 1896, he soon came to the front in the Antiquarian side, and besides contributing many learned and valuable papers on a variety of subjects, he acted as Hon. Secretary of the Club for two years and for a much longer period as Chairman of the Earthworks Committee, in which office he carried through with great

success the very important excavations at Maumbury Rings, and more recently the excavations at the Dewlish Elephant Trench, on which subject what has proved to be the last paper written by him for our Proceedings is published in our Volume XXXVI. lately issued. What I think he loved best to study was the mythical lore of the past, especially perhaps that of Scandinavia, but he was very versatile, and in the last year or two I was helping him to map the prehistoric monuments and other work in his parish of Portesham as part of a survey which it is hoped that the Club may in course of time carry out for the whole county. He also took great interest in Geology and Natural History generally, and brought much evidence together to prove that the ice in the glacial period extended over Dorset. As an *In Memoriam* notice appears in the present volume, I will not do more here than allude to his work before he came to this neighbourhood on retiring from his profession, but he was then well known in the Antiquarian world. In him I feel that I, with others, have lost a valued friend, as well as a member of the Club whom it would be hard to replace. Though Mr. Edward Cunnington ceased to be a member many years ago, having retired from the Club the first time in 1885 and the second time in 1902, he was associated with us for so long, and was also one of our few surviving original members, to whom we should always feel specially grateful, that I could not do otherwise than include his name in my list. The energy and enthusiasm with which he made his antiquarian investigations, chiefly with the use of the spade, and also maintained the conclusions he drew from them, are still fresh in the memories of all those who knew him, and I can only hope that some of this energy and enthusiasm may descend upon the present members of our Club and cause them to work seriously at one of the many branches which it comprises within its limits. Most of the results of Mr. Cunnington's excavations in barrows and elsewhere are deposited in our Museum, which is indebted to him for some of its best antiquarian treasures. If there was a barrow to be opened

or a Roman pavement to be uncovered, Mr. Cunningham was always to the fore, and as lately as last winter we heard some of his notes on his work, others of which are scattered through our volumes.

ZOOLOGY.

The question of the advantages of inoculation for typhoid has been put to the proof during the present war, and the data given in Parliament and taken from reliable sources show that not only is the mortality more than three times as great amongst those attacked who have not been inoculated, but the proportion attacked is about 14 times greater in the case of the latter. On the island of Principe the Portuguese have been remarkably successful in extirpating the tsetse fly and sleeping sickness by a campaign against the fly, and though a reward of 5 dollars per fly has been offered, none have been caught since April, 1914. An interesting observation in the Panama Canal zone has been the flights of *Anopheles*, the malaria mosquito, over a distance of 6,000 feet, from a marsh to an inhabited area, these flights being of sufficient size to attract insectivorous birds. A report of the Board of Agriculture on swine fever assigns the cause to a microbe too small to be microscopically visible, and gives various recommendations in connection with the disease, including a method of vaccination against it. The address of the President of the Zoological Section of the British Association last year was on the evolution of the cell. The subject was of course an abstruse and speculative one, and I must refer my hearers to the Address itself for any details. The Address in the Physiological Section was also on the subject of cells, and was entitled "The Physiological importance of Phase Boundaries." It also is too abstruse and technical to be further dealt with here. There were many interesting papers in the zoological section some in connection with material collected on the visit of the Association to Australia in 1914. The rearing and

observation of the larvæ of Echinodermata and other allied marine groups has been successfully carried on at the Plymouth Marine Station, and this has now been extended to the Copepoda, which enables their development to be more carefully studied than by isolated observations on them in their natural state. In the cruise of the Albatross in 1906, great quantities of Crinoids were met with, and a monograph has recently been published on this group, shewing it to be much richer and more important, as regards living species, than had hitherto been thought to be the case, though the fossil series is, of course, very extensive. In the Philippine Islands it has been observed that the Crustaceans *Atya* and *Caridina* have their chelæ furnished with long hairs. *Atya*, when feeding in a running stream, rests with these hairs projecting up the stream so that they may catch any organisms that are carried along in the water. *Caridina* uses them as brushes to brush up any food on the bottom. In regard to the number of growth rings on the shell of an oyster as a sign of its age it has been lately shown that an oyster of 18 months may have from two to five rings, one of 2½ years the same, or six rings, one of 3½ years (4 summers) from three to eight. The test is not therefore very reliable. It is to be regretted that two oyster-parasites, introduced originally from America with oysters, a Venus shell, *Petricola pholadiformis*, and a slipper-limpet, *Crepidula fornicata*, are spreading considerably, the former having now reached the Dutch Coast. A good deal of information on the subject of determining the age of fish by means of the growth rings on their scales has been obtained from experiments near Iceland and the Farøe Isles, in which marked cod were liberated and more than half of them captured again a year or more later. Fish have been scarce owing to the war, but a record catch for a single boat has been made of 280,000 herrings. In the Lake of Tiberias it has been found that there are a certain number of genera and species which are identical with Ethiopian forms, showing a former connection. These forms are all fish, and none of them the

lower forms of life, as one might expect. They mostly belong to specially hardy genera which might more easily adapt themselves to waters of different salinity. Investigation of the supposed destruction of salmon by cormorants in the Gulf of St. Lawrence has proved that the cormorants are wrongly accused, and that the small salmon are eaten by large ones and by other enemies, so far unidentified. A similar accusation was formerly made in regard to the cormorants of the Murray river, Australia, but when the cormorants were destroyed, the salmon disappeared, and it was found that the birds preyed on the crabs and eels which devoured the salmon fry and eggs. In the hot springs at Buena Vista in Colorado, young toads have been found plentifully in the water up to 93° Fah. and one specimen up to 113°, after which any found were dead ones. The thrush is not generally looked upon as a migratory bird, but a specimen, ringed in Lancashire as a nestling on April 4, 1914, was found at Pontillado in Spain on Nov. 18 last. An interesting book on American bird migration has lately been published by the U.S. department of Agriculture and gives particulars of many American species. In June, 1915, immense quantities of sea birds were killed on the E. Coast of Scotland by masses of floating oil, probably the cargo of some torpedoed ship, and those which survived had their feathers so coated with it that they could neither fly nor swim. The sufferers were chiefly guillemots, razorbills, puffins, and eiderducks. Experiments in homing on the noddy and sooty terns, two migratory birds, proved that they would return to their summer haunts, when transported 1,000 miles in cages, over ground which they did not cover in their migrations, being north of their northerly limits, which suggests that other birds besides pigeons probably possess this habit. The slaughter of fur-bearing animals in America is enormous, and attempts are made to breed silver foxes, skunks, &c., for the sake of their skins, with success, but not yet to any great extent. Some animals have been exterminated, whilst of others, such as the sea otter with a beautiful fur which less than 100

years ago was taken by the thousand, only a few pairs survive. Some of the American game fauna, such as the bison, are in much the same condition, and nature reserves on a large scale would seem to be the only cure. The difference in the susceptibility of different animals to certain poisons is well illustrated by some experiments with strychnine on squirrels and quails, the squirrels succumbing to a dose of only 2·7 milligrams, whilst the quails could swallow 40 milligrams with impunity. Two specimens of Cuvier's whale (*Ziphius cavirostris*), which was only known as British from a single skull from Shetland, have been stranded on the coast of Ireland and secured for the British Museum, which now receives telegraphic information of the stranding of all Cetacea. In Ireland, in the Dublin Zoological Gardens, is the only living gorilla in Europe. Its health was a subject of anxiety recently, but it is to be hoped that it will continue to flourish. The survey of the Lake of Tiberias has already been mentioned. Surveys have also been made of the fauna of the Chilka lake in Bengal, and a complete regional survey of Clare Island in the County of Mayo, Ireland, in which no less than 3,219 plants and 5,269 animals were recorded, of which 11 plants and 109 animals, all however amongst very low forms of life, were new to science. I have reserved to the end of my zoological section my congratulations to our distinguished member, my friend, Mr. Frederick D. Godman, F.R.S., on the completion of the monumental work, "*Biologia Centrali Americana*," dealing with all branches of the natural history of Central America in detail in no less than 63 volumes beautifully and fully illustrated, and altogether one of the finest contributions ever made to scientific knowledge. Mr. Salvin, his joint author, did not, unhappily, live to see the end of his work.

BOTANY AND AGRICULTURE.

At present the more practical of the two heads of this section is in people's minds owing to the war, and the Address

of the President of the Agricultural Section of the British Association deals with "Farming and food supplies in time of war," giving many particulars of our food production at different times, and especially during the periods in the last 120 years in which we were at war. Though something has been done to increase our home-grown supplies, it will always be necessary, with such a dense population, to import a great part of our food, and without our Navy we should soon be starved into submission. There were papers on various branches of the same subject giving many useful hints for increasing the food supply. Some experiments on feeding calves, carried out at the W. of Scotland Agricultural College, show that separated milk and crushed oats form an economical food, very little behind whole milk in its results, and at about half the cost. Through testing of the roots and careful selection the sugar yield of beet has been increased from 10.1 p. cent. in 1870 to 18.5 p. cent. in 1912, with occasional individual roots yielding as much as 27 p. cent. The wheat crop of the United States has been much damaged by the attacks of the Hessian fly, which it is stated can be avoided by delaying the autumn sowing until a short time after the flies have emerged, as they would then find nothing on which to lay their eggs. It has been believed that radium exercised some effect on the growth of seedlings, but the most recent experiments have shewn practically no result. Some races of *Bacterium subtilis* have shewn a remarkable vitality when immersed in sterilising liquids and have survived in 5 p. cent. phenol for 50 hours and in other similar liquids in which their immediate destruction would have been expected; opening serious medical questions. A new electrical method of testing the vitality of seeds has been discovered, the electrical response being proportional to the seed's vitality. The botany of the Philippine Islands is being well worked, and 7,000 species of flowering plants are known, as against about 2,500 15 years ago. The floras of different parts of India have in many cases been published and are still being worked out, that of the Nilgiri and Pulney Hill-tops being

the last issued; 900 species of *Cratægus* from the United States are now recognised, and in the Proceedings of the Royal Irish Academy a Report on the Mosses of Ireland is given, 118 new species having been added since 1872. The immense number of so-called American species of *Cratægus* reminds one of the great number of species of brambles and roses which have been described by some of our botanists, and which doubtless present points of difference amongst themselves, but as to how far each so-called species would permanently reproduce itself and remain constant is a difficult question. Some of the low forms of life are very uncertain in their appearance, for instance, a fresh water Alga (*Hydrodictyon reticulatum*), which is rarely seen in this country, was found in the autumn of 1914 in the lake at Kew, in enormous quantities, so that it had to be cleared from the water. It has been found that many of our cultivated varieties of fruit trees, apple, pear, plum, &c., are self sterile and only produce fruit when fertilized with pollen from some other variety. It is therefore necessary to pay attention to this fact when planting orchards.

GEOLOGY.

A full report of the excavation of the Dewlish Elephant Trench is published in our last volume of Proceedings, which makes it clear that the trench was formed by natural forces and not by human agency, though there are differences of opinion as to the method, and some minor points, such as the way in which the brilliant polish on many of the flints was produced appear to me to require further elucidation. I have specimens of extremely similar polished flints from a fissure at Portland, but did not see them in situ.* I under-

*It had occurred to me whether the rubbing together of the flints under pressure in the fissure could have produced the polish, and Captain G. R. Elwes has now shown by actual experiment that a brilliant polish can be produced on some pebbles by merely rubbing them together for a considerable time.

stand, though I have not seen them, that flints are found in the Egyptian desert, brilliantly polished by the slight and continuous friction of the dry sand, but such conditions could hardly have been the cause either at Dewlish or Portland. It has been found that the observed epicentres of earthquakes lie chiefly on two great circles cutting each other at right angles. Some slight earthquakes have taken place in this country, one in the Cumberland District on Oct. 2, one in the neighbourhood of Loch Lomond on Dec. 19, and one, the widest in area, on Jan. 14 last, the latter being felt all over England, except in the extreme North and South. Two much more serious ones took place, the one on June 22, in California, the other on Jan. 14, 1916, in Australia and New Guinea, but whether this had any connection with the English earthquake of the same date is not clear, and also one on Sept. 6, 1915, in Western America. Another severe one in Nevada on Oct. 2, 1915, was recorded in England. On Dec. 19, 1915, a great fall of chalk took place in the cliffs over Folkestone Warren, burying the railway line and doing considerable damage. "The Crust of the Earth" formed the subject of the President's Address in the Geological section of the British Association, and much of the evidence available as to its formation and alteration was brought forward. It was recently stated that the rare and valuable metal platinum, the world's supply of which nearly all came from Russia, had been found in the Lower Rhine district of Germany; but this requires confirmation.

To turn to fossils. Fossil Bacteria resembling Micrococci have been discovered in the ancient Newland limestone of Montana in association with algæ, which are the earliest plant remains known. In the same district have been found, in a higher bed, the remains of crayfish-like animals, which are the earliest known animal remains. It is thought that these bacteria may have been an important factor in the formation of this deposit. A small camel (*Stenomylus hitchcocki*) from the Lower Miocene of Nebraska has been placed in the British Museum of Natural History. It is slender and

gazelle-like in build and was one of a herd of these animals discovered. A Mioene dolphin has also been described from California, and about 60 new species of insects, chiefly beetles, have been obtained from the Mioene insect beds of Florissant, Colorado. In the Lower Pliocene Snake Creek beds, Nebraska, have been found a large number of fossil animals, including about 12 species of horses, several camels, three rhinoceroses, two mastodons, a new type of antelope, the first of the bisons, and many others. To come nearer home, a fine example of a gigantic fossil elephant (*Elephas antiquus*) has been excavated at Chatham and will be eventually set up in the Natural History Museum. It is the first specimen of this species which has been found in this country in which the other bones have been associated with the skull, and enough has been recovered to enable a complete restoration to be made of the skeleton, which probably stood about 15 feet high, rather less than the height of the Dewlish elephant, *Elephas meridionalis*, but more than that of the mammoth.

ASTRONOMY.

The President's address in the Section of Mathematics and Physics in the British Association gave an outline of the manner in which the present knowledge of "The Construction of the Heavens" had been obtained. It contains a great deal of information and is well worth reading by anyone interested in the subject. I may say the same of the part of the address of the President of the South African Association for the Advancement of Science which is devoted to Astronomy. In regard to certain methods of research, the photographic determination of parallax is increasing in accuracy, the mean probable error of some determinations at the Mount Wilson observatory being less than .006 in. A recent method of measuring the motions of stars is to place two photographs of the same portion of the sky, taken some years apart, in a stereoscope, when the stars that have moved in the interval

present a solid appearance to the eye. The so-called "blink" method is a modification of this, and by this method a 12th magnitude star with the large motion of 5·lin. per ann. has been discovered. It is suggested that the sequence of evolution of different stars can be deduced from the differences in the spectra presented by them, which are also connected with their temperatures and colours. About one-eighteenth of the stars above 9·0 magnitude are found to be double. A new complication has been introduced into the study of the spectrum by the discovery that the wave lengths of the same substance produced under different circumstances are subject to slight variations, the cause being as yet unknown. The variable star Mira Ceti has been displaying unusual variability, as its maximum brightness in 1915 did not nearly reach the usual amount, though slight variations in the maxima have previously been detected. Among many other prizes offered by the Paris Academy of Sciences is one of 100,000 francs to anyone finding a means of communication with any other planet except Mars. So many wonderful discoveries have been made in recent years, that it is not impossible that this prize may be claimed, though we are at present quite in the dark. It is said that a green flash may sometimes be seen at sunset, but I have never been successful in seeing it, though I have sometimes looked out for it when a clear sunset took place, which is not of very frequent occurrence in these regions. I should be interested to know if any of our members have been more fortunate. From observations during the eclipse of August 21st, 1914, the equatorial velocity of rotation of the sun's corona was found to be about 3·9 kilometres per second, or rather higher than previously supposed. The war has prevented the observation of the solar eclipse of Feb. 3, 1916, which was total over parts of Columbia and Venezuela, by any but American observers. It had been hoped to investigate the corona further. Several meteors have been seen worthy of record. One on July 5 at 8.30 p.m., seen in Dorset and several other counties. Several about August 12th. A very fine one on

Oct. 5th, in S. Wales and Cornwall, which left a luminous track visible for from 2 to 20 minutes. One on Dec. 15, seen at Bristol, and a very large one, accompanied by a violent explosion, over the Chusan Archipelago and from Shanghai, in the forenoon of Feb. 13, 1915. In connection with this subject, I may mention that there is or has lately been an interesting exhibit at the London Library of early printed books on Astronomy, including the "Poeticon Astronomicum" of 1488, a copy of which, with its 47 curious and entertaining, but very inaccurate woodcuts of constellations, I exhibited to the Dorset Field Club some years ago.

METEOROLOGY.

Though the rainfall during the year 1915 over the whole of the British Isles taken together was little more than the average, the amount in certain parts, such as the S.E. and much of the E. Coast, was considerably above the average, whereas that of the N.W. of England and the W. of Scotland was below. The fall at Montevideo, Chickerell, in 1915, was 35·72in. as compared with 29·63in., the average there for the past 18 years, and the fall in December last, 8·74in., was the greatest recorded there for 18 years in that month, being even higher than the 7·31in. recorded for December, 1914. The highest fall in 24 hours in the 18 years was also recorded in 1915, on October 23, and amounted to 1·98in. The adoption of the millimetre for rain measurement by the Meteorological office and the British Rainfall Organization marks a step in decimal notation in this country. A thunderstorm took place on May 6, 1915, marked by an unusual fall of rain, which amounted to more than 3in. over an area estimated to be about $\frac{1}{2}$ -mile wide and $1\frac{1}{2}$ mile long, between the City and King's Cross, between 8.30 and 10 p.m.; the highest fall actually recorded being 3·12in. Contrasted with these figures, the rainfall at a station in Java has amounted in one year to 398·1in. and the greatest fall in 24 hours to 20·1in.,

and I believe that even these figures are exceeded in some other parts of the world. Two waterspouts were seen on August 16, 1915, at about 1.0 p.m. off Dymchurch, in Kent, during a thunderstorm, consisting of a long narrow funnel connecting a dark cloud with the sea at a point where the surface was violently agitated. In one case the funnel was seen to be in rapid rotation. Observations taken for several years at Helwan in Egypt, 80 miles W. of Suez, shew nearly half the days with a clear sky. On the rest, cirrus clouds are the most frequent, other forms being more occasional. Fogs occur sometimes in the early morning during the winter months. During a thunderstorm near Gibraltar on May 25, 1915, a shower of frogs is said to have fallen, drawn up, it is supposed, from a lake 20 miles distant. This is believed to have been a genuine shower, but a sudden migration of small frogs from a pond during a shower of rain might in some cases furnish an explanation of such a phenomenon. The month of January last was exceptionally warm, the mean temperature at Greenwich being 7.2° above the average of 75 years and 2° higher than any year since 1841. The highest actual reading recorded was 57° on January 1 and 17, which has only once been equalled in the course of the past 75 years, viz., on January 28, 1843. For those interested in upper air temperatures, a report has been lately published of the results of about 60 ascents in Java. In the report of the Australian Antarctic expedition lately published, the extreme force of the wind is spoken of as one of the greatest trials of the expedition in Wilkesland. Gusts are recorded with a velocity of 200 miles an hour, and 180 miles was common. On May 15 the mean for 24 hours was 90 miles per hour, and the average speed of the whole year 50 miles, a speed which would constitute a very severe gale in this country. How anything could stand against these fearful hurricanes, often with driving snow, one can hardly imagine. There may have been a little uncertainty about the accuracy of the anemometer in the higher records, as these instruments are apt to be unreliable, but the force was in any case

tremendous. A blizzard of unusual severity swept over this country on March 27 and 28, and caused much damage, the speed of the wind rising in some places to 80 miles an hour. The barometer on March 27 fell below 29°, but on March 29 had risen an inch in 24 hours. Gun firing has been reported to have been heard during the present war at great distances from the scene of action, at 125, 140, and in one case, on somewhat more doubtful evidence, at 150 miles. The distance is doubtless dependent to a great extent on atmospheric conditions. A beautiful aurora was seen in England in the evening of November 5 last. A luminous arch variously described as pale rose-lemon or whitish green or colourless by observers in different parts, was intersected by bright streamers shooting up from the horizon and receding and having a rotary movement towards the left. It was seen in Yorkshire, Lancashire, Essex, &c. Swedish observations of auroræ about 2,500 in number, have given the most usual height above the earth as from about 90 to 130 kilometres, none being below 90, whilst they occasionally reach a height of 230 kilometres.

ELECTRICITY.

In experimenting with wireless telephony the great distance of 2,500 miles has been covered by the United States Navy Department, and if the results should prove to be reliable under all conditions, a great advance will have been made in this branch. Under the direction of the Royal Society the magnetic re-survey of the British Isles is being continued as fast as can be done owing to the war, and but few districts remain to be surveyed. Much interference with the telegraph service took place over a large area of N. America stretching right across the Continent during a fine display of aurora on the night of June 16, 1915, and a magnetic storm of considerable magnitude took place in this country on June 17, beginning at 1.50 a.m., and followed by other less intense

storms in the course of the next few days. A large group of sunspots existed, but the connection between them and the storms, though suspected, is not certain.

CHEMISTRY.

The year 1915 being the centenary of Davy's invention of the miner's safety lamp, the President of the Chemical Section of the British Association read an address on "The Ignition phenomena of Gaseous Combustion." The war has brought to our minds the great importance of being self-supporting in the way of chemistry and not trusting to obtaining many of the chemical products we require from Germany or elsewhere, and great steps have been made in this direction, some with a view to the provision of necessary munitions for the war, and others for trade purposes, both during it and after peace has been concluded. The salary and general status offered to a chemist by many manufacturing firms is so inferior that it cannot be expected that any good man would accept such a post. This state of things it is hoped to remedy. I think that the first desirable step would be to find a new name for a scientific chemist, to distinguish him from a tradesman whose accomplishments are limited to selling drugs and making up prescriptions, as this is usually the meaning of the word in the popular mind. A committee has been appointed for the important purpose of standardising chemical products with regard to their purity, and to endeavour to obtain that reliability in respect to those of English manufacture which is necessary for their success. The Bureau of Standards at Washington has lately issued a useful table of melting points of metals and other standard temperatures, and it has also been shewn that in all the solids which have been experimented upon, the melting point rises regularly under pressure up to 12,000 kilogrammes per square centimetre, the greatest pressure employed, without shewing any maximum or critical points. The war,

of course, whilst it lasts, must take the first place in regard to chemical work as in all other matters, and explosives claim perhaps the greatest share of attention, and consequently also such substances as cotton and nitric acid, which is made synthetically from the nitrogen contained in the atmosphere in Norway and Germany, though I doubt if it is yet manufactured in this country. Nickel is another important munition metal, and an attempt is being made to procure it refined from Canada. And there are many others in this connection such as that caused by the necessity of protection from and retaliation with the poisonous gases so barbarously used by the Germans against us. A new, cheap, and easily produced disinfectant employed on board ship is electrolysed sea water, which also seems to be effective. Mineral springs have been discovered in Colorado in which so much radium is present that it is hoped it may be extracted and produced at a much lower cost than its present price. It has been found that a very thin strip of mica, when exposed to the X-rays for a week or so, is bent, the side exposed to the rays becoming convex and displaying iridescent colours, and that the α particles are deposited in the mica in the form of helium.

ENGINEERING.

By far the most important and extensive movement in engineering is due to the war, which has required so enormous an output of munitions of all kinds and has converted numbers of factories hitherto used for other purposes into places for the manufacture of deadly or protective weapons. The invention and use of new methods of attack by the enemy have to be combated by similar means on our part, and though secrecy is at present desirable, there can be no doubt that many inventions, great and small, have been made, for air, earth, and water, of which we may hear later, but the benefit of which we are already reaping. The great importance of the work of scientists both in chemical and other inventions, and

also in connection with manufactures of many sorts, has been repeatedly insisted on during the present war, the advantages which Germany held in many branches of manufacture before the war having been shewn to be due in many instances to her better appreciation of scientific men and their employment in all her larger works and manufactories. An ingenious apparatus for locating the direction and distances of other vessels in a fog is dependent on the difference of time required by a wireless signal and a sound signal to reach the same point. A series of telephones is placed round the ship, and each is so protected that it will only register sounds coming directly towards it, the direction of the distant ship being thus ascertained. The danger of fire in houses from aircraft attacks has brought to the front the question of fire extinguishing apparatus, some varieties of which are unreliable and limited in their action, water in buckets being more effective. The occasional failure of tin plugs in boilers to melt when the boilers were overheated has been traced to the presence of zinc which formed a compound only fusible at a much higher temperature. The restrictions on the importation of papermaking material will cause a search for home-grown substances which are suitable, and amongst these straw will probably be used, as it used at one time to be employed to a considerable extent for this purpose. In regard to the very desirable coal economy, peat can be employed to produce gas, and can in this form be used for fuel under conditions in which in its raw state it would not be available, and doubtless many other substitutes will be discovered, necessity being truly the mother of invention. The cinematograph is beginning to be used for advertising machinery, by shewing its actual working on the screen. Submarines have lately been used for hydrographical purposes, being so arranged that a diver can leave the submarine for the purpose of investigating the bottom of the sea near by. The Kensico dam, a work for the supply of water to New York, has just been completed and has involved the use of 880,000 cubic yards of concrete, the removal of

2½-million cubic yards of earth, and the blasting of rock in some parts to a depth of 65 feet. Three English dams on a somewhat smaller scale have also just been completed for the water supply of Bradford, of Leicester and other towns, and of Birkenhead. Of these the first is the largest, being 1,200 feet long, and 130 feet high, but its capacity for storage is 1,250,000,000 gallons, as against 3,000,000,000 gallons in the Birkenhead dam. In the building of houses, the limit of height has surely been reached in the Woolworth Building in America, which contains no less than 55 stories. The greatest height recorded by an unmanned balloon is 22 miles, and by a manned one nearly 7 miles. Above this height no clouds occur. In surveying, the completion of the Indian portion of the connection between the triangulations of Russia and India should be noticed. Survey work in New Zealand was curtailed by the splendid response to the demands for the war made by its men, but the completion is announced of the maps of that country on a scale of ten miles to an inch.

GEOGRAPHY.

The romantic adventures of Stefansson, the leader of the Canadian Arctic Expedition, who with a few companions was separated from his ship, which was afterwards crushed by the ice and destroyed, have fortunately ended happily by his return after having been given up for lost. In spite of his separation he persevered in his explorations, travelling many hundred miles and discovering some new land rising to a height of 2,000 feet. More recently, somewhat disquieting news has reached us of the Shackleton Antarctic Expedition. The ship *Aurora* broke loose from her moorings in May, 1915, and was damaged and drifted in the pack ice, but has arrived in New Zealand. Unfortunately several of the party were left stranded near Cape Evans, and the position of the other ship, the *Endurance*, and Sir Ernest Shackleton's party is uncertain. It is hoped, however, that they may

all be able to sustain themselves until help arrives. A Danish exploration is now being planned to Northern Greenland. A Siberian expedition under the leadership of a Polish lady, of which the object was chiefly Ethnological, has also been accomplished, large collections of weapons, implements and other native products having been made. Also an expedition to the Karakorum range, aiming at a highly scientific and full survey of that region, which appears to have been carried out successfully. The last exploration that I have to refer to is one in the Amazonian country by Captain Whiffen, of which the account has lately been published and contains much information about the natives, their life, language, and ways. The difficulties and dangers are of a very different nature from those of the Arctic zone, but none the less real, perhaps rather more so in that swampy forest country.

ARCHÆOLOGY AND ANTHROPOLOGY.

It would certainly seem remarkable that the same drawings by early Mexican artists, before the discovery of America by Columbus, should be considered by some to represent elephants and by others, macaws, but such is the case, and there certainly seems to be some resemblance to both. In view of the improbability of the former interpretation, and of the peculiar characteristics of the drawings, my sympathies lean towards the macaw. The antiquity of the burial mounds and ancient pottery of Peru has been much discussed, with a great variation as to their age, the last investigator, on the spot, putting them at not more than 2,000 years, which sounds more likely than some of the dates assigned. The absence of any written records doubtless makes the ascription of any date very uncertain. Some paintings have lately been discovered in caves at Raigarh in India which are said to be much older than any other known Indian paintings. They are mostly of hunting scenes. A remarkable piece of evidence of the existence of early man in Argentina, has been

discovered in the bone of *Toxodon*, a fossil animal of perhaps Pliocene times, in which an implement of quartzite was apparently imbedded during life, the bone having grown up round it. A human lower jaw of Neanderthal type has lately been described, which was found in 1887 at a depth of 5 metres in a bed of tufa in Catalonia. The exact geological age cannot be determined, but the jaw is completely fossilised and retains all the teeth, which are large and much worn. This is the second instance of Neanderthal man in Spain, the other being a skull from Gibraltar, in 1848. The Talgai skull, found in the Darling Downs, Queensland, was completely mineralised and belongs to the Pleistocene period, and is specially interesting as having been brought into notice, though found 31 years before, at the visit of the British Association. It has been bought and presented to the Sydney University. A portion of an early skull has also been found at Boskop in South Africa, but its age seems to require further confirmation. A valuable paper by Professor Petrie, on ancient Egyptian worked flints, appears in "Ancient Egypt" for 1915. Civilized man goes back so far in that region that the prehistoric period there has perhaps been somewhat overshadowed. The last report of the Archæological Survey of Nubia deals much with the history of its inhabitants, and is most important, as the flooding of the country will prevent any future investigations. Both N. and S. of Port Durnford, on the E. Coast of Africa, have been found quantities of ruins, which do not, however, go back beyond the foundation of Mahommedanism. There are also in Somaliland numbers of artificial mounds, probably sepulchral of early date, some 30 feet high. A workshop of Palæolithic flints has been discovered at Highfield, Southampton, with great numbers of implements in various stages. Excavations have been continued in the Palæolithic cave site in Jersey, with numerous finds of implements and bones. The address of the President of the Anthropological Section of the British Association dealt with the early history of the Sudan, alluding specially to the worked flints and

ground stone axes of Neolithic date, which are numerous. There are also a few monoliths, but megalithic remains are much more numerous in the peninsula of Sinai, where are found beehive tombs, rock circles, and hut circles. The sale of Stonehenge resulted in its purchase by a local landowner, but in any case being included under the Ancient Monuments Act, it would be protected. In excavations at Patna a vast pillared hall of the 3rd Century B.C. has been unearthed, containing 8 rows of monolithic columns, 15 feet apart, somewhat resembling the great hall at Persepolis. At Caervoran, Northumberland, an officially certified Roman bronze measure of the 1st Century has been found, with a capacity of $17\frac{1}{2}$ sectarii, about 2 gallons. An analysis has been made of some pomade in a Roman amphora excavated near Lugano, which was found to be composed of a mixture of beeswax and other fats added to styrax and turpentine macerated in wine, with some henna. Our Vice-President, Mr. J. S. Udal, has contributed to "Folk Lore" an interesting account of the Obeah Cult in the West Indies, shewing its immense influence and dire results. In these days of collecting, when rare specimens in all branches fetch high prices on account of their age or rarity, and not for their intrinsic merit, fakes and imitations abound to deceive the ignorant or unwary collector, and I see it stated that even the Australian natives have taken to manufacturing imitations of their ancient implements in considerable quantities. An interesting collection of children's toys, ancient and modern, has been presented lately to the Borough of Stepney, and is exhibited at the Whitechapel Museum. There are many such things still obtainable which should be collected and preserved before they die out and are supplanted by new forms.

GENERAL.

A great deal has been written since the war began about the importance of utilizing science and scientific methods

in connection both with the war itself and with our manufactures and in other ways. I think there can be no doubt that the Germans owe much of their success both in war and commerce to the employment of scientific men and methods to an extent far beyond anything we have hitherto attempted in England, and in so far we may take a lesson from them. At the same time, in spite of this, it would seem from statistics that Germany has been by no means so prolific of the new inventions themselves as England, but she has been much more ready in developing and making use of them without regard to where they may have originated. In the matter of scientific research the results may be apparently very small for a long time and for a considerable expenditure, but it is the only way to progress on a sure foundation, and the results in the long run are well worth the labour and money expended. It is said that "Art cannot be forced"—no more can science, and if a larger number of competent men were put in such a position that they could devote their lives to research work, the nation would be the richer by it. This matter has been discussed in Parliament, and a scheme proposed constituting an "Advisory Council on Industrial Research," which it is hoped will meet the case and open the way to further improvements. Hitherto nearly all research work has been done without payment or reward, and it is naturally the case that the great bulk of those who are capable of this work have to spend most of their time in earning a livelihood in some more remunerative way. A point connected with the above is the large number of products for which we have been either chiefly or entirely dependent on Germany, but which we are now by force of necessity trying to learn how to make for ourselves. In so far as this can be accomplished it will be for the financial benefit of the country, as large sums have been annually sent abroad in payment. The shortness of dyes has been much before the public, a shortness in which America, and probably other countries too, have also suffered greatly, and America, with no war on her hands, is using every endeavour to overcome the difficulty and become self-

supporting. At the meeting of the delegates of Corresponding Societies of the British Association, to which we send a representative, the subject of Museums was dealt with, the careful preservation of objects therein being rightly considered of the first importance, and after that the educational, which is I think more cultivated in our Dorset Museum under our present Curator than formerly, and helps much to foster a general feeling of the importance of science amongst the community. Much stress is laid on the educational side of Museums in America. The question of sending objects of national interest to the national museum was discussed, and this point has lately been brought forward in regard to some of our own treasures. There is much to be said in favour of this plan as regards safety (except from Zeppelins in war-time) and convenience for comparative study, but specimens that will bring scientific men down to a local museum are not to be lightly given up by those who benefit by their visits. Another subject was that of colour standards, it being considered that a scheme of 200 well named colours would best meet the case. It would be desirable in preparing such a series of colours to use only those, as far as possible, which do not alter their relative shades when viewed by artificial light. The war has put a temporary stop to many things, and especially to many large schemes unconnected with it, but the foundation stone has been laid of a new Hindu University in our dominions beyond the seas, at Benares, for which purpose the people of India have raised a sum equal to nearly two-thirds of a million pounds sterling. Men, as well as plants and animals when removed from their native country and transplanted to a new one, seem to acquire a great access of vitality, and flourish to an unheard of extent, and I cannot conclude my address without referring to the Australian contingent whose chief English Camp is just opposite to my house, and with whom I have had the privilege of much intercourse for many months. Without dwelling upon their physical advantages, I have been much struck by the high quality of general intelligence and knowledge which prevails

amongst them in all ranks of life, and I have made many friends whose acquirements and tastes would, to say the least, make them very desirable acquisitions to our Club, and, in some cases, to the more specialized learned Societies. It is pleasant to think that the late visit of the British Association to Australia has brought us into nearer scientific touch with a people to whom we are under such a deep debt of gratitude for their noble response and help in the present war.

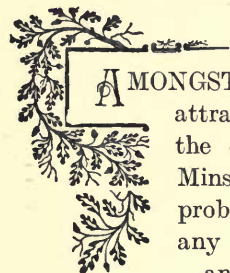




“The Man in the Wall” at Wimborne Minster.

By the Rev. Canon J. M. J. FLETCHER, M.A., R.D.

(Read 7th December, 1915.)



AMONGST the many objects of interest which attract more than ten thousand visitors during the course of the year to the justly famed Minster at Wimborne, there is one which is probably sought for more frequently than any other, unless it be the Chained Library—and that is the sarcophagus of Anthony Ettrick, often spoken of as “The Man in the Wall.” He is generally regarded as having been a mere eccentric. I think that I shall be able to show that he was both an eminent barrister and a distinguished antiquary.

There is a tradition in the family, possibly an authentic one, that one Anthony Etterick, of Barford, who was born about 1504, was Captain of Horse at the siege of Boulogne, when that place surrendered to Henry VIII. in 1544.* And

* *Burke's Commoners*, Vol. III., pages 15-19.

there is a further tradition that he was a younger son of Lord Ettrick, Earl of Dumbarton; but that he had expatriated himself owing to his being implicated in family feuds.

Whatever may be the truth of these traditions, there is no doubt that the Etterickes, or Ettricks, were settled at Barford, in the parish of Wimborne Minster, in the sixteenth century; and William Ettricke, of Barford, whose will is dated Nov. 28, 1575, was evidently a substantial farmer there. He gave directions that his body was to be buried in the church porch at Wimborne Minster, near to his children. He mentioned his wife Elizabeth, and left bequests of land, horses, and bullocks to his sons William, Giles, John and Anthony. (P.C.C. 11 Carew).

It was probably this son Anthony who, by will, dated March 1st., 1612, and proved Dec. 29, 1613 (in which he is described as "Anthony Ettrycke of Barford, within the parish of Wimborne Minster, gent."), left to the church of Wimborne 20s., "to the poore people of the parishes of Wimborne and Sturminster Marshall a quarter of corne to be baked in bread and delivered them for their reliefe according to the discretion of my executor." To his wife Maud he left for her life the Mill (house) at Sturminster, to his son Andrew £100; to his son William "The coppiholds at Barford;" and to his two daughters, Penelope and Lewis (Louise), £200 between them "from the letting of the mills at Sturminster." (P.C.C., 117 Capell).

William Ettrycke, mentioned in this will, married Anne, daughter of William Willis of Pamphill. Their eldest son Anthony is the subject of this sketch.

Anthony Ettrick was born at Barford on Sunday, Nov. 15th, 1622,† for which reason "his mother would say he was a Sundaye's bird."

† Aubrey's *Brief Lives*, &c., Edited by Andrew Clark, Oxford, 1898, Vol. I., page 250.

Residing as he did in the parish of Wimborne, it is only natural to assume that he received his early education at the Grammar School in that town. We may well hope that the experiences of his boyhood's days were happier than were apparently those of his contemporary and almost lifelong friend John Aubrey, the Wiltshire antiquary, who wrote in 1670 as follows :—†

“ From the time of Erasmus till about 20 years past (1536-1650) the learning was downright pedantry. The conversation and habits of those times were as starcht as their bands and square beards ; and gravity was then taken for wisdom. The doctors in those days were but old boys, when quibbles past for wit, even in their sermons. The gentry and citizens had little learning of any kind, and their way of breeding was suitable to the rest. They were as severe to their children as their schoolmasters ; and their schoolmasters, as masters of the house of correction. The child perfectly loathed the sight of his parents, as the slave his torture. Gentlemen of 30 and 40 years of age were to stand like mules and fools bare-headed before their parents ; and the daughters (grown women) were to stand at the cupboard side during the whole time of the proud mother's visit, unless (as the fashion was) leave was desired, forsooth that a cushion should be given them to kneel upon, brought them by the serving man, after they had done sufficient penance in standing. . . . At Oxford (and I believe at Cambridge) the rod was frequently used by the Tutors and Deans. And Dr. Potter, of Trinity College,* I know right well, whipt his pupil with his sword by his side, when he came to take leave of him to go to the Inns of Court.”

“ Anthony Ettorick ” matriculated at Trinity College, Oxford, in September 1640, when he was in his eighteenth year. The President of the College at that time was “ the worthy but singular ” Dr. Kettle, the predecessor of Dr. Hannibal Potter, the flagellant above mentioned. A year and a half afterwards, John Aubrey became a student at the same College. The two young men may have known one another before their Oxford days, for Aubrey, although a

† *Wiltshire. Topographical Collections* by J. Aubrey, Edited by Canon Jackson. Published by Wilts Arch. Soc. 1862, pages 16, 17.

* President of Trin. Coll. 1643-1648 and 1660-1664. cf. Walker's *Sufferings of the Clergy*, Pt. 11., p. 133.

Wiltshire man by birth, had been at school at Blandford. But whether they had first become acquainted in the days of boyhood, or whether the acquaintance was first commenced when they were fellow students at the University, it ripened into a friendship which lasted for life. Aubrey had been looking forward with eager anticipation to a University career; but these were troublous times, and Oxford had its share of troubles. Aubrey writes as follows:—"Peace *Atque inter sylvas Academi quaerere verum*. But now did Bellona thunder: and as a clear sky is sometimes over-stretched with a dismal black cloud, so was the serene peace by the Civill War through the factions of those times. *Amovere loco me tempora grato*. In August following (1643) my Father sent for me home for feare." He returned to the University in February, though it was but for two or three months, since owing to a serious epidemic of small pox in Oxford in April and May, he left the University for three years, and Ettrick was deprived of his companionship.

One event in their college life is narrated by Aubrey:—"In my time † Mr. Anthony Ettrick and some others frighted a poor young freshman of Magdalen Hall with conjuring, which when the old Doctor (Dr. Ralph Kettell, President of Trinity College from 1598 until his death in 1643) heard of on the next Tuesday, sayd he, 'Mr. Ettrick,' who is a very little man, will conjure up a jackanapes to be his great-grand-father.' "

Aubrey and Ettrick were both keen archæologists, and it was perhaps this common pursuit which made them such close friends. From time to time Anthony Ettrick is mentioned in Aubrey's autobiography and other works; and an account of him is given in the volume of ‡ *Brief Lives*. It is here recorded that in the months of July and August,

* *Wiltshire Archæological and Natural History Magazine*, Vol. IV. (1858), pp. 101, 102.

† Aubrey's *Brief Lives of Contemporaries*, &c., Vol. II., p. 18.

‡ *Ibid*, Vol. I., p. 250.

1660, the two friends went together for a month's visit to Ireland, and that on their return journey they were very nearly shipwrecked at Holyhead.

Aubrey gives Anthony Ettrick of Trinity College first place in his list of *amici*, or special friends,* and at his death he "left to the library of Jesus College, Oxford, such of his books as Anthony Ettrick, or John Lydell,† also of Trinity College, should think fit." †

On August 1st, 1650, he was married, at Gillingham, to Anne, daughter of the Rev. Edward Davenant, D.D., Vicar of Gillingham and nephew of the Bishop (John Davenant) of Salisbury. Mrs. Ettrick's father was credited by Sir Christopher Wren with being "the best mathematician in the world." He was a man of vast learning, and had a noble library—the aggregate of his father's, the bishop's, and his own. According to Aubrey, Dr. Davenant had the following "excellent way of improving his children's memories":—he would make one of them read a chapter, or whatever it might be; "and they were (*sur le champ*) to repeat what they remembered, which did exceedingly profit them; and so for sermons he did not let them write notes (which faded their memories), but let them give an account *viva voce*."* Mrs. Ettrick inherited to some extent her father's mathematical gifts, and was an "excellent algebraist."

Anthony Ettrick had been admitted to the Middle Temple on Nov. 26, 1641, and in course of time filled there almost every possible position of dignity. He was called to the Bar on Nov. 26, 1652; became a Bencher 22 Nov. 1672; a Reader in Lent term 1674; and was appointed Treasurer in 1678.

The following references are extracted from the Records of the Middle Temple:—†

* Ibid, Vol. I., p. 43.

† Walker's *Sufferings of the Clergy*, Pt. II., p.133.

† Ibid, Vol. I., p. 52.

* † *Middle Temple Records*, by C. H. Hopwood, K.C., 1904.

1652. Nov. 26, Called to the degree of the Utter Bar, Ettorricke A.

1657. May 6, Mr. Antony Ettorricke of the Utter Bar to the chamber of Messrs. John Stowell and Edward Wallis, both of the Utter Bar, in the S.W. corner of Elme Court, up one pair of steps, on surrender of the latter ; fine £3.

1670. Nov. 25, Mr. Ettorricke's petition touching the beautifying of the great gate is referred to the Treasurer.

1672. Nov. 22, Mr. Antony Ettricke is called to the Bench in order to his reading, or depositing £50 in lieu of a Chamber till he has performed his reading, and paying all arrears of duties. He shall continue to be two years of the lower form at the Bench and read when appointed.

1673. Oct. 24, Mr. Antony Ettricke is elected Reader for next Autumn.

1673-1684. During these years Ettrick was constantly chosen to act upon various committees which were appointed to consider the erection of new buildings, alterations to existing buildings, the beautifying of the Church, the alteration of the seats, &c., &c.

1678. Oct. 25, Mr. Anthony Ettricke chosen as Treasurer.

His Coat of Arms,—*Argent a lion rampant and a chief gules*,—are, I believe, still to be seen in a panel at the Temple.

From 1662 until 1682 he was Recorder of the town of Poole.

From 1665 until 1687 he was one of the Church and School Governors of Wimborne Minster.

He was one of the "barons" of Corfe Castle, for which borough he stood as candidate for Parliament in 1677, in the room of Sir Ralph Bankes, deceased ;* but he surrendered it in favour of Lord Latimer, who was "chosen a Parliament man." However, he was elected member of Parliament for Christ Church, Hants, in 1685, and represented that place until 1687.

Ettrick's friendship with Aubrey, the great Wiltshire antiquary has been already spoken of. He was no mean antiquary himself :—

Our County Historian, Hutchins, in the preface to his first edition, writing of earlier Histories of Dorset, says "Mr.

* *Domestic State Papers, Charles II.*, 1677, Calendar page 81.

Camden has given us a short but accurate account of it (*i.e.*, the County of Dorset) in his *Britannia*, which, in Bishop Gibson's edition, received considerable additions from Anthony Ettrick, Esq., of Holt in this County, an eminent lawyer."

In the Introduction to the 1st Edition of *E. Gibson's* (afterwards Bishop of Limerick) *Camden's Britannia*, published in 1695, it is stated that "Mr. Anthony Ettrick returned what he thought most remarkable in Dorsetshire."

These additions were considerable ; for whereas the text of the *Britannia*, so far as Dorset is concerned, is to be found in pages 43 to 51, Ettrick's contributions occupy pages 51 to 56.

In the second edition of *Gibson's Camden*, Ettrick's additions are incorporated in the text, although they are enclosed in square brackets. And further additions are made by Mr. Bennett.

But it appears as if the very existence of *Hutchins' History of Dorset* may be indirectly due either to Anthony Ettrick or to his father-in-law Dr. Davenant ; for, in his Introduction, Hutchins writes as follows :—"About the year 1737. . a friend in Oxford . informed me that there was a MS collection containing inquisitions, extracts of records out of the public offices, the Valor Beneficiorum of 1291, and other curious particulars relating to the county which formerly belonged to Dr. Davenant, vicar of Gillingham, and afterwards to Anthony Etterick, Esq., who married a relation of his, and was then in the hands of Mr. Sandford, B.D., senior fellow of Baliol College. . . The perusal of this MS first induced me to make further collections."

It could scarcely be considered an anachronism to say that Anthony Ettrick was by birth and education "a Tory." His father, three times at least in 1647 and 1648, was charged with "delinquency," his goods were seized and secured, and he himself was ordered to pay £24, "for fift and twentieth part as by ordinance of Parliament injoynd," though the charges brought against him were not at this time proved,

and he was "adjudged not sequestrable."* Eighteen months later, on 21 February, 1649, he was reported to be worth £200 a year, and was accused of having published a letter from Sir John Bankes to his tenants, asking them to strengthen Corfe Castle against the Parliament, and of † having ridden at the head of a party of horse to a neighbour's house, of having plundered it, and of having taken him prisoner. Anthony's younger brother, Walter, who had followed him to Trinity College, Oxford, was, with the President of his College and more than 60 fellow members of the University, expelled for his loyalty to the King, by order passed on June 29, 1648,—the order with the names being fixed to the doors of the University Church‡ In early life Anthony seems to have been more occupied with his legal studies than with politics. As years passed on, his "Toryism" became more noticeable.

During the time that Anthony Ettrick occupied the position of Recorder of Poole, one Samuel Hardy was appointed to be Rector. This was in 1667. Hardy had been sent down from Oxford in consequence of his unwillingness to take the necessary oaths before proceeding to the degree of Master of Arts. He had been Vicar of Charminster before going to Poole. He was a Presbyterian at heart, and it is doubtful whether he had ever been episcopally ordained. Poole was a Peculiar, and so exempt from Episcopal and Archidiaconal Jurisdiction. Amongst the *Tanner MSS.* in the Bodleian Library at Oxford, are a number of letters written in 1681 in connection with this case. Hardy is accused of priding himself on his impunity, as the Rector of an Exempt Peculiar—"of Christening, Burying, and Administering the

* *Minute Books of Dorset Standing Committee*, Mayo, 1902, pages 296, 411, 422, 430.

† *Calendar of Proceedings of Committee for Advance of Money*, Pt. II., p. 1025.

‡ Gutch's Edition of *Wood's History and Antiquities of the University of Oxford*, 1796, Vol. II., Pt. II, pages 593, 595. Walker's *Sufferings of the Clergy*, Pt. II., p. 134.

Sacrament his own way without the use of the Book of Common Prayer." Ettrick took up the matter warmly. And amongst the MSS. are letters from him to the Bishops of Exeter and Chichester asking for an introduction to the Archbishop of Canterbury, from the Bishops of Bristol, Exeter, and Chichester to the Archbishop, recommending Ettrick to him—and from Philip Traheron, one of the Ministers of Wimborne, to the Archbishop, in which he signs himself "Your Grace's most obedient son and most affectionate servant," asking him to help Mr. Anthony Ettrick. He states that "on Trinity Sunday, May 9th, 1681, Hardy had left the Church destitute both of Sermon and Divine Service, though it was also the annual Festival established in commemoration of His Majesty's happy Nativity and Restoration."* Poole being a Peculiar, the Bishop of Bristol, in whose diocese the County of Dorset then was, could do nothing. Hardy had been presented before the Officials of the Peculiar Courts of Poole and of Canford without effect; hence Ettrick's wish that the Archbishop of Canterbury should intervene. Eventually a presentment was made of Hardy to one of the judges of assize, who was asked to beseech the King "in his princely wisdom to think of some expedient for the redresse thereof." As a result a commission was issued, and Hardy was deprived of his benefice.

We pass on for three or four years. The battle of Sedgemoor had been fought. A few days afterwards, on the eighth of July, 1685, the Duke of Monmouth was discovered, dressed as a shepherd, with a beard prematurely grey of several days growth, hidden in a ditch. The place where he was captured was beyond the village of Horton, and to this day it is marked by an ash tree which is called Monmouth's Ash.† The nearest magistrate was Anthony Ettrick, who resided at Holt Lodge,

* *Tanner MSS.*, 129, Nos. 54, 55, 57, 59, 60, 61, 62, 73, &c.

† Quite recently the Earl of Shaftesbury has had a brass tablet affixed to the tree, bearing an inscription.

in the parish of Wimborne. Before him was the Duke brought for preliminary investigation of the charges brought against him ; and just a week later he was beheaded on Tower Hill.

In the Churchwardens' Accounts for Wimborne Minster is the following entry :—(1685).

“pd to the Ringers for Ringing wn Monmouth was taken
 . . . 00.02.06.”

We read in the second edition of Hutchins that, towards the close of his life, Anthony Ettrick

“grew very humoursome, phlegmatic and credulous, of an impulse of spirit, insomuch that having once (as I have been credibly informed) a share in a ship and cargo, and receiving advice that the same was safely delivered in Portland road, he was so far persuaded that the same ship would be lost before she could arrive at the port of London, to which she was consigned, that he sold his share therein, though at a considerable discount. He had, however, the good fortune to be a great gainer in the end, for (agreeably to his forebodings) the ship was lost in her passage. Whether these or other accidents in life gave him occasion I cannot say ; but he afterwards remained fully persuaded that he should die in the year 1691,* and accordingly procured his tomb to be made, and had that date cut on as may be plainly seen, the same being altered to 1703, in which year he died and was buried.”

Report says that Anthony Ettrick, being offended with the inhabitants of Wimborne, made a solemn protest that he would never be buried within their church or without it—

* The Rev. R. Grosvenor Bartelot has pointed out to me that there was a common impression that some remarkable event would happen in the year 1691, the number being the same when read upside down ; and he has given me the following extract from the Parish Register of West Stour in Gillingham. It is to be found in the volume commencing in the year 1653 :—

“ When numbers four turned upside downe
 Makes numbers even and numbers years y^e same
 Downe goee y^e french men and their crown
 Together with their fame 1691.”

It might be noticed that West Stour must have been well known to Anthony Ettrick, seeing that his wife was daughter to the Vicar of Gillingham. Will there be the same superstition about the year 1961 ?

neither below their ground or above it—that is to say, neither in their church nor yet in their churchyard; † but that, after his anger had cooled down, he had a great longing for his body to be laid, after his death, beside the bodies of his ancestors. With the skill of a lawyer, he endeavoured to evade breaking his oath by obtaining permission to make the recess in the wall where his coffin is placed—neither within the church nor yet in the churchyard, and where the surface of the ground outside would be neither above nor below it.

An old writer, describing a visit paid to Wimborne on Sept. 13, 1750, speaks of “The tomb of Mr. Anthony Etrick, which is made like a stone coffin, half in the wall and half in the church, which was made in his life time, this being his fancy, like Nostre Dames at Salon between Arles and Aix, to be buried neither in the church nor out of the church. But his relations put him in a vault under ground directly under the tomb.”* And so the stone coffin does not contain his body after all. For at the restoration of the Minster, during the years 1855-1857, his remains were found *beneath* the coffin in a moist state. They were carefully replaced where they were found.†

In the year 1692, writes Hutchins, “he obtained a licence from the Rev. William Watkinson, Official of Wimborne, for erecting this tomb, and for such liberty gave to the Church for ever a rent of 20s., which is paid by the Corporation of the town and county of Poole, out of the tithes of Parkston near that town, being part of a fee-farm rent thereon.” Amongst the documents belonging to Wimborne Minster is an indenture made between Anthony Ettricke of the first part and Nicholas Mackrell and William Warham, the then

† cf. Hutchins' *History of Dorset*, 1st Edit., 1774, Vol. II., p. 95.

* *Travels through England of Dr. Richard Pococke*, Bishop of Meath and of Ossory, in the years 1750-1.

† *Salisbury Journal*, October 3, 1857. (Account of the Restoration and Re-opening of Wimborne Minster.)

PHOTO BY E. KAYE DE FLEMING.



Anthony Ettrick's tomb.

Churchwardens of Wimborne Minster, of the second part, on April 16th, 1703, from which we can learn a little more about this gift :—John Fitch of Henbury was in possession of a certain fee farm rent of £12 16s., “payable out of and for the Rectory and Church of Poole.” A portion of this, amounting to the annual rent of £3, he sold to Anthony Ettrick for £60, by indenture dated May 31st, 1693. A yearly rent of twenty shillings Anthony Ettrick gave by the above mentioned indenture to the Churchwardens and their successors for ever in consideration of the sum of 5s. paid to him by them, and because he had “obtained a grant to him and to his heirs of and from the Official of the peculiar jurisdiction of Wimborne Minster of a certaine quantity or plott of ground lying in the church of Wimborne Minster aforesaid for a buriall place for himselfe and his family.” The remaining £2 of the annual rent of £3 which he purchased from Mr. Fitch, Ettrick devised to the fellows of Trinity College, Oxford (where he had himself been a student about 60 years before) “to be spent on wines and tobacco on the fifth of November, yearly.” The remaining £9 16s. was apparently sold by Fitch to William Stone who had been one of the three “Presbyters,” or Ministers of Wimborne Minster, and the founder of the (chained) library there. It was by him added to the income of St. Margaret’s Hospital at Wimborne.

Anthony Ettrick died in the beginning of July, 1703. The following is a copy of the entry in the Burial Register at the Minster :—

“1703, July, Anthony Ettricke Esquire, Buried ye 5.”

His tomb is to be found in a recess in the south wall of the Trinity Chapel. This chapel, before the great “restoration,” one is almost tempted to say “devastation,” of 1855-7 was, so to speak, the “Westminster Abbey” of Wimborne, where were laid the bodies of the more important inhabitants ; and the walls, &c., were covered with their memorials. There were the Hanhams of Deanscourt, the Fitches of High Hall, the Constantines of Merly, the Warhams of Leigh, the Russells, the Waytes, the Lanes, the Beethells, the Ettricks, &c.

(though other Ettricks were interred in the N. porch). Here too was the elaborate monument of Sir Edmund Uvedale, of Horton, and in the centre of the floor was the altar tomb of Dean Berwick, who died in 1312. And a portion of the crypt just by was used as the burying place of the Bankes of Kingston Lacy. Most of the memorials, such of them as remain, have been scattered about in different parts of the church! Three of the Ettrick ones, of which that of Anthony is one, still remain in their original positions.

The tomb in question is of slate, painted. Originally, it was inclosed with iron rails. On the top are five coats of arms :—Ettrick impaling Davenant, Ettrick impaling Bacon, Ettrick impaling Hooper, Player impaling Ettrick, and Hody impaling Ettrick. On the shields in front are the arms of Ettrick quartered with Bacon, and of Ettrick impaling Wyndham. Between these, in gold figures, is the date of his death, 1703. This had been altered from the date of the year in which he had expected to die, 1691, which had been painted in silver.

Anthony Ettrick was not the only member of his family who possessed eccentric ideas with regard to the method of his sepulture ; for it is recorded of a certain Justice of the Peace, one William Ettrick of High Barnes, Bishopwearmouth, who died 22 Feb., 1808, at the age of 82, that, by his will, (proved in the Durham Consistory Court 18 June, 1808), he left the sum of £1,000 for a marble monument to be erected in Bishopwearmouth Parish Church to his ancestors—Walter (great grandfather), Anthony (grandfather), and William (father). The will was proved by his son, Rev. William Ettrick. It made provision for an eccentric sort of coffin which was to be drawn to the grave in his dung cart.* This William Ettrick was descended from† Walter, above mentioned,

* (Newcastle) *Monthly Chronicle of North Country Lore and Legend*, 1870, pages 69 and 70.

† There is a full pedigree of Ettricke in Vol. XIII. of *Visitation of England and Wales*, by F. A. Crisp, p. 195 ; cf. also *Notes to the Visitation of England and Wales*, Vol. XI. pp. 61—68.

the younger brother of Anthony, who was, as stated above, expelled from Trinity College, Oxford, in 1648, in consequence of his loyalty to King Charles. He became, after the Restoration in 1661, the collector of customs at Stockton and Sunderland, and Register of the Court of Admiralty. He purchased the estate of High Barnes. He was born 26 April, 1628, and died at Bath 2 August, 1700.

Of Anthony Ettrick—it is sad to feel that it is his eccentricities alone which are now remembered, and that the story of them is handed down from generation to generation by means of the coffin in the wall at Wimborne Minster. The position of eminence which he attained to at the Middle Temple is a proof of the high esteem in which he was held by his legal confrères ; and we are of the opinion that it will be granted that there is sufficient evidence in this paper to show that his antiquarian knowledge and researches have been of no little service to later historians of his native county of Dorset.





List of Dorset Barrows.

OPENED BY MR. E. CUNNINGTON, OR DESCRIBED BY HIM.

Compiled by Captain JOHN E. ACLAND, F.S.A.

(Read 7th Dec., 1915.)



THIS list of Barrows opened by Mr. Cunnington is compiled from his own MS. notes contained in a volume, now in the library of the Dorset County Museum, recently presented by Miss Cunnington.

Although the list is given in an abbreviated form, care has been taken to describe as far as possible the exact position of each barrow, the contents and the date of excavation ; for it is believed that these details, published in a readily accessible form, will prove of great advantage to those, in the future, who may contemplate similar work in the neighbourhood.

With few exceptions they are all within a few miles of Dorchester. One principal group lies on Ridgeway near the two roads to Weymouth from Dorchester and from Martins-town; another group lies to the N.W. of Dorchester and Poundbury. The "finds" from many of the barrows are in the cases in the Dorset County Museum; and in the Library may be seen drawings of cinerary urns, and plans connected with Mr. Cunningham's investigations.

- 1 & 2. Two barrows under the Roman Vallum, S.E. angle of Dorchester, *i.e.*, East end of South Walks. They were close together. An urn with ashes was found, and also several skeletons. A.D. 1864.
3. On Conygar Hill, 1 mile South of Dorchester. At 7ft. from surface a skeleton, and close by a cremation. Worked flints. 4th March, 1880.
4. Ditto, more to the East. At depth of 1ft. 6in. cremation in urn, flower pot type. At 5ft. near centre, 2 cremations; at 9ft. a large block of Portland stone 7ft. x 4ft. x 1ft. 6in.; at 13ft. 0in. contracted skeleton; a cremation, urn and six beautifully cut flint arrow heads near the knee joint. There were many worked flint scrapers, &c. (D.C.M.) 13th March, 1880.
5. Duddle Heath, $2\frac{1}{2}$ miles N.E. of Dorchester on right side of road. This barrow had been disturbed, and much soil carted away in 1872, when many urns were destroyed. Two now in D.C.M.
August, 1880.
6. Herringston barrow, South of Dorchester. Skeleton contracted. Ashes, worked flints, and fragments of pottery. Several large sarsens. Sept., 1880.
7. Near Dorchester waterworks. At 8ft. from top, bronze spear head 9in. long. Dagger, $3\frac{1}{2}$ ins. with rivets. Urn and burnt bones. (D.C.M.) Jan., 1885.
8. Frome Whitfield. On left of road to Bradford Peverell $1\frac{1}{2}$ miles from Dorchester. Contracted skeleton, below ground level. Other cremated remains, fragments

of pottery. Small bronze dagger 2½ins. with rivets (Coin of Tetricus on surface). Aug., 1879.

9. Frome Whitfield, in 2nd field from Farm House. Six feet below ground level, skeleton in large oval grave 8½ins. x 6ft. 0ins., with bronze dagger, 3ins.; also other burials, worked flints, &c. July, 1879.
10. Frome Whitfield. On right of road to Bradford Peverell, 1 mile from Farm. Skeleton and a piece of Samian pottery near top. Contracted burials lower. Food vessel, with handle. Flint implements, &c. Aug., 1881.
11. Frome Whitfield. Long Barrow. Next field to No. 10. 162ft. long, 62ft. wide. Trench cut throughout the length, and also across. Some human remains found. Sept., 1881.
- 12 & 13. Frome Whitfield, ½ mile from Farm, 300 yards South-West of road. There are 3 barrows in a row. In one, 2 drinking cups with skeleton; in the other, ashes. March, 1880.
14. Frome Whitfield. Barrow with trees on it. Had a low bank round it. One cremation; and lower, much ashes. Sept., 1887.
15. Clandon Barrow, between Maiden Castle and Martins-town. Composed of layers of sand, clay, and gravel. 2ft. from surface, 2 graves 4ft. apart made of rough flat stones, 6ft. long; 17 stones used for 1 grave, nothing found with these interments. Four feet lower, layer of flints 1ft. thick, and on the edge of flints bronze dagger, and bronze ring attached to remains of wood sheath; diamond shape gold ornament finely tooled; jet sceptre head with gold disks; fragments of amber cup; a little lower, an incense cup; also much black ash, and a crushed cinerary urn. (D.C.M.) Sept. 15-20, 1882
16. Clandown—smaller barrow—80 yards from No 15. Remains of 14 burials. Skeletons, and cremations, and a beaker. Aug., 1883.

17. Maiden Castle. The large barrow N.W. When opened for erection of flagpole, skeleton found near surface, probably Roman.
18. The small barrow 200 yards west of No. 17, nearly destroyed by plough—nothing found.
19. Frome Whitfield, near No. 14. In small hollow at ground level, part of inverted urn with burnt bones.
Feb., 1884.
20. Came Down, N.W. corner, nearest to Herringston. A cremation, and good flint implements.
Aug., 1882.
21. Bridport Road. $2\frac{1}{2}$ miles from Dorchester, close to road. S. side. Near top, skeletons, and a cremation, and fragments of pottery. Aug., 1884.
22. Ditto, same field as 21. Cremation in small cist at ground level—piece of stag's horn, and flint implements. No date.
23. Ditto $1\frac{3}{4}$ miles from Dorchester, South of road. Contracted skeleton in cist 5ft. 6in. below ground level. There was much burnt soil in the barrow. Fine stag's horn pick. Now in D.C.M. Opened by Mr. Sivewright and Captain Acland.

July, 1896.

Section through centre showed following sequence of soils, from the top. 2ft. 6in. natural soil; 2ft. of soft, rich, dark soil; 4ft. 0ins. clean flints resting on old ground level. There were also narrow seams of burnt earth.

- 24 & 25. Bridport road, near No. 23. Previously disturbed and much worn down. August, 1885.
26. Down near Preston White Horse. Previously opened. The primary burial, cremation in cinerary urn.
August, 1882.
27. Puddletown Heath on highest ground near boundary of Colonel Brymer's property. The most northern of 3 barrows close together. Cremation. No date.
28. Lewell. Near side road to West Knighton. Cinerary urn with bones and ashes. (D.C.M.) Sept., 1890.

The following 13 Barrows, No. 29—41. are on Ridgeway, and are shewn on the plan hanging in the Museum; there are a large number of barrows in the same locality.

29. (*No. 1 on plan*), close to Weymouth and Martinstown road. There was a stone circle, diameter 10ft. composed of 22 stones, with an open space or entrance of 8ft. Within this circle were 2 cists cut in the chalk, and at a depth of 3ft. the capping stones of 2 kistvaens were reached, which were lined with thin stone slabs, and a large stone upright in the centre to support the roof. With one skeleton were two small vessels about 4 inches high, and in the other kistvaen, the stones composing it were carefully and exactly fitting, and it contained the bones of a young person. Aug., 1884.

30. (*No. 2 on plan*). Contracted skeleton, with food vessel, and near feet, a cremation.

March, 1884.

31. (*No. 3 on plan*). One cremation. Aug., 1884.

32. (*No. 4 on plan*). Contained a kistvaen, 4ft. x 2ft. lined with flat stones, and covered with a large stone. Contained some bones. (Nos. 2, 3, 4 are close together.) August, 1884.

No. 5 on plan is the very fine example of a ringed barrow, which appears not to have been opened by Mr. Cunnington.

33. (*No. 6 on plan*) near Dorchester and Weymouth road. Nothing of interest found. Sept., 1881.

34. Another barrow in same field, not shewn on plan; cremation in badly baked urn. Nov., 1888.

35. (*No. 7 on plan*). Near the top a cremation, with 2 bronze daggers, 6ins. long, one having 4 rivets and the other 6, and decayed wood of sheaths; also an early type bronze celt with small portion of textile fabric adhering, and a portion of another bronze dagger. In addition to these objects, two gold ornaments of oval shape probably fixed to a dagger

handle, and carefully tooled. At 6ft. from top was a floor of rough flat stones, a layer of flints, and a 2nd floor under which, protected by 5 stones, was a skeleton, and a bronze dagger 7 inches long with 3 rivets. A cairn of stones 7ft. 0ins. high rested on the solid chalk, and here were found a bone ornament with narrow opening, a 7-sided stone hammer with central hole, a bone needle, and many flint implements. Under the cairn of stones was a kistvaen covered by a stone 5ft. 0in. by 4ft. 0in. supported by 6 upright slabs, which formed a chamber 4ft. 0in. by 2ft. 0in. and 2ft. 0in. deep. The sole contents were the decomposed portions of a skeleton. Sept., 1885.

36. (*No. 8 on plan*). S.E. of Friar Waddon, and close to boundary wall of the down, on South side. Near the top a child's skeleton and a piece of black Roman pottery. At depth of 6ft. an extended skeleton, laid between Portland stones, and near the head a food vessel. At same level another extended skeleton, with food vessel. Three feet below these skeletons, a fine urn 16 inches high, 14ins. diameter, half full of burnt bones, and close to it a small urn 4½ins. high. At the ground level, a contracted skeleton which had been protected by large stones, about 2ft. 0ins. square and 4ft. thick; they were in a cist with the remains of a child. A fragment of a saddle quern of Portland chert was found in the barrow. Sept., 1885.
37. (*No. 9 on plan*). Used for many cremations, but nothing found. August, 1886.
38. (*No. 10 on plan*). Near Nos. 7 and 9. Similar to No. 9. August, 1886.
39. (*No. 11 on plan*). Like the last two, many cremations, nothing found. Oct., 1888.
40. (*No. 12 on plan*). Bones of a skeleton, and a beaker. Oct., 1884.

41. (*No. 13 on plan*). At 2ft. from the surface a cremation ;
a fine cinerary urn full of ashes and burnt bones.

Oct., 1888.

42. The Down Wood, 2 miles from Blandford, on the left
of the road towards Wimborne. Opened in the
presence of the Field Club, Sept. 29, 1881.

At 3ft. 9ins. from surface, three cremations ; the
primary interments 3ft. 0ins. below ground level ;
3 contracted skeletons. No pottery found.

43. Little Piddle. About 1 mile S.W. of Piddlehinton,
on Mr. C. Mayo's Farm. Five urns found with
burnt bones—4 of them Dorset flower-pot shape—
8 cremations altogether in this barrow.

August, 1881.

44. Ditto close by the last. 1 cremation.

45. Ditto on Mr. C. Mayo's eweleaze. Five cremations ;
5 urns, 4 being the Dorset flower-pot shape.

Aug., 1881.

46. Plush. On the high ground above Plush. It was
levelled about 1871-2, when, it is said, 30 or 40
cinerary urns were discovered.

47. Plush. Near No. 46. Greatly reduced from its
original size. At the centre one urn with burnt
bones, protected by large stones.

August, 1879.

48. Plush. Between Nos. 46 and 47. An urn, and cre-
mation at ground level. No date given.

49. Worgret—1 Mile west of Wareham. Opened by Mr.
J. F. Pennie between 1825-1832, who sent an account
to the *Dorset County Chronicle* and *Gentleman's*
Magazine. He stated that 24 urns were found in
the upper part. The broken remains of one urn
were given to Mr. Cunnington, and were restored
and placed in the D.C.M. 19 inches high, 15 inches
diameter at top.

50. Fern Down, north of Eggardon, opened in XVIIth
century. Mentioned by Camden.

51. Eggardon. Previously disturbed, and material taken away. 6 bronze socket axe heads found early in 1882. Now in D.C.M.
52. Blackdown Hill. 100 yards north of the Hardy Monument. Gravel, &c., had been carted away. Nothing found. Sept., 1878.
53. Portesham. Near the Helstone cromlech (45 yards S.E.). An urn containing burnt bones, and a stone covering its mouth rested on the undisturbed soil. August, 1894.
54. Gorwell, "Grey mare and colts." Mr. Cunnington states that this "Long barrow" has been opened at both ends, but gives neither date nor any details.

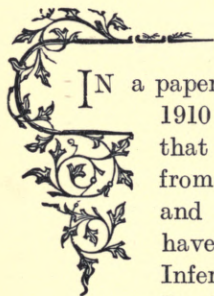




On the Stratigraphical Distribution
OF THE
Inferior Oolite Vertebrates of the
Cotteswold Hills and the Bath—
Burton Bradstock District.

By L. RICHARDSON, F.R.S.E., F.G.S.

(Read 7th Dec., 1915.)



IN a paper published in the Geological Magazine for 1910⁽¹⁾, I recorded all the vertebrate-remains that I and Mr. Charles Upton had collected from the Inferior Oolite of the Cotteswold Hills and Bath-Douling district. Since 1910 I have completed my investigations of the Inferior Oolite between Douling and Burton Bradstock, and therefore—in order that future workers may know exactly what has been found in the way of vertebrate-remains and the horizons whence they came—the records are now tabulated.

¹ Geol. Mag., dec. 5, vol. vii. (1910), pp. 272—274.

The late H. B. Woodward has written :—

“ The Inferior-Oolite Series has yielded a rich and varied Invertebrate fauna, but the remains of Saurians and Fishes are very rare.

The Reptilia that have been found include *Megalosaurus* and *Steneosaurus*, and the Fishes are represented by *Hybodus*, *Strophodus*, etc.”

At the end of the work from which the above quotation is taken is a list of the vertebrate-remains which had been collected up to that year, namely, 1894. ⁽²⁾

In 1904 I gave a list of the vertebrate-remains which had been recorded from the Cheltenham district ⁽³⁾, and, except for the insertion of a record of vertebræ and bones of ? *Ichthyosaurus* from Leckhampton and Sudeley Hills (on the authority of James Buckman and H. E. Stickland), and the more precise stratigraphical location of certain of the other recorded remains, my list was the same as that mentioned above as given in the Geological Survey Memoir.

LIST OF VERTEBRATE-REMAINS FROM THE INFERIOR-OOLITE OF THE COTTESWOLD HILLS AND BATH—BURTON BRADSTOCK DISTRICT.

(Those distinguished by an asterisk were formerly in the
Author's collection, but are now in the collection of
the Natural History Museum, South Kensington.)

REPTILIA.

Dinosauria.

Megalosaurus bucklandi von Meyer. I have seen bones, possibly belonging to this dinosaur, in the *Truellei*-Bed of Stony-Head Quarry between Bridport and Loders Cross on the Dorchester Road.

² “ The Jurassic Rocks of Britain—The Lower Oolitic Rocks of England (Yorkshire excepted) : ” Mem. Geol. Surv., vol. iv. (1894), pp. 519—22.

³ “ A Handbook of the Geology of Cheltenham ” (1904), p. 230.

The fine remains of a *Megalosaurus bucklandi* secured by Mr. E. Cleminshaw (then of Greenhill, Sherborne, but at the present time, 1915, of Birmingham), and now in the Sherborne School Museum, are stated by (Sir Richard) Owen, who described and figured them ⁽¹⁾, to have come from the "Inferior Oolite" of "near Sherborne." They came from the Sherborne Building Stone of *garantianæ* hemera.

Quart. Journ. Geol. Soc., vol. xxxix (1883), pp. 334—346, and pl. xi., figs. 1, 2, and 3. Casts of the specimens figured by Owen have been made and are exhibited in the Natural History Museum, South Kensington, to which institution Mr. Cleminshaw presented the counterpart of the large piece—that depicted in fig. 1.

Mr. Cleminshaw informs me

"I did not actually find the remains myself. A friend told me that in some building-stone got out for building a new house in Cold Harbour, Sherborne, what he thought were reptilian remains had been found. From his description, in answer to my enquiries, I knew at once what they were and secured them. The site of the quarry in which the remains were found is very near the back of the houses on the north side of Cold Harbour Road, but it is quite possible that the quarry, which was only opened for building-stone, may not now be used. There were many small quarries round Sherborne, which were worked for a short time and then abandoned (*in litt.*, 10th Sept., and 13th Oct., 1914.)

"The middle part of the crown of a tooth: from the Inferior Oolite of Sels[e]y Hill, Gloucestershire" is in the Natural History Museum (R. 497). It was figured by Owen in his "Wealden and Purbeck Reptilia," pt. iii., pl. xii., fig. 5 (1). The precise horizon is not given.

CROCODILIA.

Steneosaurus megistorhynchus (Deslongchamps). "Fragment of maxillary rostrum, showing three dental alveoli."

"Gryphite-Grit" (*shirbuirniæ*). Bajocian.

(*Vide* R. Lydekker, Cat. Fossil Reptilia in the Brit. Mus., pt. i. 1888, p. 116.)

¹ *Vide* R. Lydekker, Cat. Fossil Reptilia in the Brit. Mus., pt. 1 (1888), p. 161.

- *? *Steneosaurus* sp. (1) Reptilian jaw, perhaps *Steneosaurus*.
Witchellia-Grit (*witchellia*). Bajocian. Cold Comfort,
 near Cheltenham.

ICHTHYOPTERYGIA.

Ichthyosauria.

- ? *Ichthyosaurus* sp. Vertebrae and other bones. ? Bajocian.
 Leekhampton and Sudeley Hills.

Vertebrae and other bones, referred with a query to *Ichthyosaurus*, are recorded by James Buckman and H. E. Strickland (2nd ed. of Murchison's "Outline of the Geology of Cheltenham," p. 80) from "Leekhampton and Sudel[e]y Hills," but the record requires confirmation.

SAUROPTERYGIA.

Plesiosauria.

- *? *Plesiosaurus* sp. Tooth. Lower *Trigonia*-Grit (*discitæ*).
 Bajocian. Frith Quarry, near Stroud. *Pecten*-Bed
 (*sauzei*), Sunny-Hill Quarry, Cole, Somerset.

Professor S. H. Reynolds and Dr. C. W. Andrews both state that the tooth from the Frith Quarry is "Plesiosaurian in type."

The specimen from Sunny-Hill Quarry, broke during the process of extraction, but was similar to that queried as plesiosaurian from the Frith Quarry.

- *? *Pliosaurus* sp. Two teeth. Top of Lower *Trigonia*-Grit or bottom of *Buckmani*-Grit (*discitæ*). Bajocian. Tuffley's Quarry, near the Air Balloon Inn, between Cheltenham and Birdlip, Glos.

Professor S. H. Reynolds states that these teeth "are exactly like Pliosaurian teeth in the British Museum"—an identification confirmed by Dr. C. W. Andrews.

A piece of bone 6 inches long was obtained from the Gryphite-Grit (*shirburnia*) of the west side of the Slad Valley, Stroud, by Mr. Charles Upton.

PISCES.

ELASMOBRANCHII.

Selachii.

Asteracanthus. See *Strophodus*.

Hybodus sp. Base of "The Limestone Beds" ⁽²⁾ (*zigzag*).

Bathonian. East-Hill Quarry, Bradford Abbas, near Sherborne, Dorset.

This tooth broke when an attempt was made to chisel it out.

Strophodus. General Note.—The teeth called *Strophodus* include two species: one in which the crown is flat (*S. magnus* Ag.), and the other in which it is considerably elevated, and the tooth itself long and narrow (*S. tenuis* Ag.). Satisfactory figures of these species will be found in the "Catalogue of the Fossil Fishes in the British Museum," pt. i (1889), pl. xv., figs. 2, 3, and 4-8. The teeth which have been named *S. reticulatus* are now definitely known to belong to *Asteracanthus ornatissimus* Ag., and are very differently ornamented and keeled.

S. magnus Agassiz (= *S. favosus*). Teeth. Aalenian, Bajocian and Bathonian.

RECORDS: *Clypeus*-Grit or Doultling Beds.—*Harford Bridge (near Burton-on-the-Water); *Birdlip Hill; *Slad Valley (near Stroud); *Rodborough Hill; *Soundborough Farm (near Andoversford); Quarry seven-eighths of a mile east of Paulton Church (near Radstock, Somerset); *Doultling; Woolston Quarry, near Blackford, Somerset.

Upper *Trigonia*-Grit.—*Holwell (near Frome: "*Acanthothyris-spinosa*-Bed"); *Maes Knoll, Dundry (near Bristol: "Conglomerate-Bed"); and Baggerbush-Lane Quarry, Bradford Abbas, near Sherborne, Dorset.

Notgrove Freestone.—*Belas Knap, near Winchcomb, Glos.

² Bed B of Mr. Buckman's record, Quart. Journ. Geol. Soc., vol. xlix. (1893), p. 485.

Buckmani-Grit.—*Tuffley's Quarry, near the Air-Balloon Inn, between Cheltenham and Birdlip.

Lower *Trigonia*-Grit.—Ravensgate Hill, near Cheltenham (Town Museum, Cheltenham).

Base of Pea-Grit or top of Lower Limestone.—

*Huddingknoll Hill, near Painswick, Glos.

S. tenuis, Agassiz. Teeth. Bajocian and Bathonian.

RECORDS: *Clypeus*-Grit or Doulting Beds.—

*Doulting; *Foss-Way Quarry, near Radstock, Somerset.

Upper *Trigonia*-Grit. — *Wellow, near Radstock, ("Conglomerate-Bed").

Gryphite-Grit. — *Kimsbury Castle (*teste* C. Upton), near Painswick, Glos.

HOLOCEPHALI.

**Myriacanthus* sp. Two fragments of palantine teeth. Identified by Dr. A. Smith Woodward. Inferior Oolite. Cleeve Hill, near Cheltenham.

Remains of this genus of Chimæroid fish *have not been recorded before from the Middle Jurassic*: only from the Lias and Kimmeridgian (*vide* Dr. A. Smith Woodward, Quart. Journ. Geol. Soc., vol. lxii., 1906, pp. 1-4, and pl. i; *Brit. Mus. Cat. Fossil Fishes*, pt. ii, 1891, p. 43). Unfortunately, the fragments from Cleeve Hill were not found *in situ*.

*? *Fish-teeth*. — Mr. Charles Upton found amongst the micro-organisms of the Upper Coral-Bed (*Truellemhemera*) of Rodborough Hill, Stroud, a number of minute teeth not unlike those from the Rhaetic, which are generally called "*Saurichthys acuminatus*," only much smaller. Also he obtained at the same horizon and place a minute round *Lepidotus*-like tooth.

? *Fish-remains in the Scissum-Beds*. — Brodie, writing of the beds at Leckhampton Hill (Quart. Journ. Geol. Soc., vol. vii., 1851, pp. 208-12), which are now called the *Scissum*-Beds, observes: "Bones, scales, Coprolites and teeth of Fish

are dispersed throughout the mass, and may be most readily distinguished on the surface." At Crickley Hill the *Scissum-Beds* reveal on their weathered surfaces, mixed up with the sand-grains and shell-debris, innumerable black particles, which prove to be minute phosphatic bodies. These may be the objects to which Brodie refers, but it is impossible to identify them.

THE INFERIOR-OOLITE VERTEBRATES OF NO VALUE FOR THE PURPOSE OF MINUTE ZONING.

From the above list it will be observed that the fish-teeth called *Strophodus* are commonest in the Top-Beds (and especially in the *Clypeus-Grit*); the reptilian remains (with the exception of *Megalosaurus bucklandi*) in the "Intervening-Beds;" while the Freestone Series (except at Huddingknoll, near Painswick, where *Strophodus* teeth are very common) contains very few vertebrate-remains indeed. The Upper Coral-Bed has yielded a few, but unfortunately indeterminate, teeth, although probably piscine.

Except, then, that the flat *Strophodus* teeth predominate in the Top-Beds, the little acuminate ?fish-teeth in the Upper Coral-Bed, and the reptilian remains in the Intervening-Beds, the Inferior-Oolite vertebrates afford little assistance in subdividing the series, and are useless for minute zoning purposes.



THE CHRONOLOGICAL SUCCESSION OF THE VERTEBRATE FAUNAS.

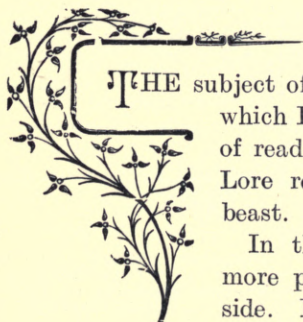
Burton-Bradstock — Doultling District.	Doultling — Stonesfield District.	
<i>Hybodus</i> sp. (tooth).	<i>zigzag</i>	
	<i>schlænbacki</i>	<i>Strophodus magnus</i> Agassiz (teeth). — <i>tenuis</i> Ag. (teeth).
Bones of ? <i>Megalosaurus</i> .	<i>truellii</i>	<i>Lepidotus</i> -like teeth.—Upper Coral Bed.
<i>Megalosaurus bucklandi</i> von Meyer.— Sherborne Building Stone. <i>Strophodus magnus</i> Ag. (teeth).	<i>garantianae</i>	<i>Strophodus magnus</i> Ag. (teeth). — <i>tenuis</i> Ag. (teeth).
	<i>niortensis</i>	
	<i>blagdeni</i>	
? <i>Plesiosaurus</i> (fragment of a tooth).	<i>sauzei</i>	
	<i>witchelliae</i>	? <i>Steneosaurus</i> sp. (jaw).— <i>Witchellia</i> — Grit. <i>Strophodus magnus</i> Ag. (tooth).—Not- grove Freestone.
	<i>shirburniae</i>	Bone (pieces of). <i>Steneosaurus megistorhynchus</i> (Desl.) <i>Strophodus tenuis</i> Ag.
	<i>discitae</i>	? <i>Plesiosaurus</i> (tooth).—Lower <i>Trigonia</i> — Grit. ? <i>Pliosaurus</i> (tooth).—Lower <i>Trigonia</i> — Grit. <i>Strophodus magnus</i> Ag. (teeth).
	<i>concavi</i>	
	<i>bradfordensis</i>	
	<i>murchisonae</i>	<i>Megalosaurus bucklandi</i> von Meyer.— Lower Freestone. <i>Strophodus magnus</i> Ag. (teeth).—Top of Lower Limestone.
	<i>scissi</i>	
	<i>opaliniiformis</i>	
	<i>aalensis</i>	



Sundry Folk-Lore Reminiscences relating to Man and Beast in Dorset and the Neighbouring Counties.

By E. A. RAWLENCE.

(Read 7th Dec., 1914.)



THE subject of the third of the series of papers which I have had the pleasure and honour of reading before the Field Club is Folk-Lore reminiscences relating to man and beast.

In the two previous papers I have more particularly dealt with the human side. In the present paper, while still dealing with that aspect, I wish to touch on some of the superstitions relating to the ailments of animals and their cure, but while you will readily realise how important these are to the bucolic mind, you will also realise that many of the complaints and remedies are not

such as I could refer to before an audience such as I am addressing. These must for the present at any rate remain recorded in my rough notebook.

The first story I propose to relate will give you an idea of the psychological condition of mind of those who imagine themselves subject to spells.

One H—, a dairyman who resided at Bishop's Down, had a turn of very bad luck, and he was persuaded that he had been bewitched by someone who had an evil eye upon him. His pigs would not fatten properly and some had died, and when he put the curd of the cheese into the vats and applied the pressure of the press it oozed out over the heads of the vats. He became so depressed under this supposed spell that he made an appointment at Yeovil with one Gulliver, a Somersetshire man, who had a great reputation for undoing spells. The appointment was kept on a market day at a certain inn, but as the inn itself was so crowded Gulliver took H— up into the hay loft over the stable, the dim light of which no doubt added to the mystery of the situation. Here H— had to tell Gulliver of all his troubles, and when Gulliver had duly pondered the tale of woe, all he said was—"Now I can tell 'ee who has bewitched yer, what shall I do we' 'en?" H—, thirsting for vengeance for all the trouble caused by the evil eye of his enemy, answered "Put out both *his* eyes." Gulliver suggested that that would be a bit hard on the man, "Won't one be enough?" H— relented somewhat and assented to be satisfied with one eye. Gulliver then said—"Now I'll tell 'ee who he be," and pointing his finger at H— said, "You be the man." You be zo anxious about yer stock that yer overlooks what yer ought for to do and does what yer ought not to do. Yer overheats yer curds and that makes 'em too zoft, zo that when yer puts it into the press it spews out. Yer gets up in the mornin' and runs out in the dark to veed yer pigs and don't do it properly. Now yer must be more quiet like and careful. Have a cup o' taa and zomethen to ate when yer gets up and don't go out we' an empty stomach."

This wholesome advice was duly followed, and needless to say the pigs did not die until their throats were cut, and the curd was firm and good, but what this homely advice cost H—I have not been able to ascertain.

A lady of a well-known Dorset family has supplied me with the following which happened quite recently, but I am not, for good reasons, permitted to mention any names or places. A certain village not a hundred miles from Dorchester was visited with a severe epidemic of whooping cough. Three of the children of a man in Mr. X.'s employ fell ill with the complaint. Mrs. X. remarked to him "I hope that your wife will not get it." "Oh, no, Ma'am," was the reply "she cant ha' it. She rode the donkey when she wer young." Mrs. X. asked for an explanation of this, and was informed "that if yer puts a chile crosswise over a donkey's back and leads 'en round a field while yer repeats the Lord's Prayer her can niver ha' the whoopen' cough. Yer must zay the prayer with meanen, Ma'am. T'aint no good if yer only zays it." Mrs. X. then said, "Have you forgotten to do this with the three children that are ill?" "Yes, Ma'am, but the little 'un have ridden the donkey." The "little 'un" up to then had escaped.

Mrs. X. is confident that the man insisted that the child had to be put "crosswise" on the donkey. My impression is that the virtue in the ass is that the child should be placed on the cross which that animal traditionally bears on its shoulder, through our Lord having ridden on one just before His Passion.

The same lady kindly gave me the following pretty legend. Recently two men were working in the garden and she remarked to one "Have you heard the nightingale?" "Yes, ma'am, he do zing an' zing an' zing all day an' night in my garden." The man working with him said, "Ha' yer ever zee'd 'en?" "Zee'd 'en? no; no man ever zee'd a nightingale, 'tis a spirit bird." "Aye, aye," replied his mate, and they went on with their digging as before.

In July, 1912, I was informed by one of the estate workmen at Sherborne Castle, who acts as one of my Scouts, that some old charm had been dug up under an apple tree on a farm at a village near by. Shortly after, I was passing that way and looked the farmer up, and obtained the following information. In a corner of the orchard near the house two or three apple trees had blown down, and another still standing had died. The farmer and his man had "beat up" the roots of the fallen trees, and then proceeded to grub up the dead tree. No sooner had they taken off the turf round the roots of the tree than they came upon a glass bottle, like a "large sweetie bottle," which was sealed down with wax, and contained some snakes and mysterious reptiles preserved in a liquid. The workman advised that the bottle should be taken to someone who lived in a large village about a mile away who knew about these things. This was done, and the wise man diagnosed that the bottle contained two vipers about 18 inches long and a large centipede about 6 inches long, preserved in spirits of wine. He also said that it was a charm put there by someone who had a spite against the farmer to bring him bad luck, and advised him to seek some wise woman who could break the spell. Now the whole secret of the catastrophe to the apple trees was out, and, worse still, the farmer himself had been really ill for the past year. Consequently, the assistance of the wise woman to whom I have before referred in these papers was at once sought. She informed the farmer that it was the work of someone who had a spite against him, and remarked "I suppose the tree wer dead." This having been admitted, "Ah," said she, "just you plant anything there and zee if it'll grow." Then the wise woman gave him the recipe for breaking the spell. "Take the bottle to zome place off the farm wher' nobody knows, dig a hole, put the bottle into it, then break the bottle and cover it down quickly." The farmer told me that it smelt "fearful" when the bottle was broken—no doubt through the exit of the foul spirits. I could not get him to disclose where the bottle was buried.

The man was evidently very unhappy, and as I left he told me confidentially that he would like a shift if I ever had another farm that I could offer him. Anyway, things have gone all right with my friend since the spell was broken. He is now the picture of health, and I hope next Michaelmas to be able to give him his desired "shift." I must not say where, for fear his enemy may forestall him with another "charm," and thus bring a catastrophe on his orchard and his prospects. It has occurred to me whether the idea of burying these reptiles under an apple tree in order to produce an evil influence originates from the scene in the Garden of Eden.

At the end of 1912 I was being motored in the neighbourhood of Wimborne, and the chauffeur told me that west of Wimborne the country side was full of superstition, and that not long since a man whose old sow had been ill had assured him that it had been bewitched by some one with an evil eye. He went to a wise woman, who gave him a charm which he had used, and he declared that he "had seen a hare jump out of the old zow's mouth and run away across the field over the hedge and disappear." I have come across traces of this idea of the disappearing hare in three other directions. I remember many years ago, alas, before I took sufficient interest in these old traditions to probe them further and record them, that the late Mr. Fred Sidford, of Knighton Farm, Bishopstone, told me that old people round Ebbesborne and Cranborne Chase used to talk about seeing a greyhound coursing a hare along the hill side, and just as the greyhound was about to catch the hare it disappeared or turned into an old woman.

An old schoolmaster of my acquaintance, in speaking to me on the subject of one of my former papers, told me that in his younger days he lived at a village near Somerton, and that there was in the district a lot of superstitions. Somerton boasted of a noted Wise Woman who was much sought after. There was a certain hare which the greyhounds or coursers, as they were locally called, used to find that always

ran straight in the direction of the Wise Woman's Cottage, and then was suddenly lost. The people declared that when they went into the Wise Women's cottage afterwards they found her with her hair loose down her back and she "in a bath o' sweat," thus proving conclusively that she was the hare that they had been chasing.*

In the *Antiquary* for April, 1915, was an article by Miss Barbara C. Spooner on "The importance of Local Cave Traditions." Amongst those quoted was the following: "The Devil pipes to witches in the fuggo at the foot of Boleigh Hill (Cornwall). Witches in the shape of hares enter, but never come out the same way." See Bottrell's "Traditions and Hearthside Stories of West Cornwall."

Now I venture to suggest that these superstitions may all have been derived from the early British legend quoted by Elton in his chapter on "Religion" in his book *Origins of English History*, pages 253—4. I quote the following passage:—

"The White Fairy Ceridwen makes war upon the prince of the dwarfs. In one form of the story the Fairy becomes an old witch and the dwarf is a boy who watches the boiling cauldron. Three drops of the liquor of knowledge are tasted by Gwion. Pursued at once by the hag "he changed himself into a hare and fled, but she transformed herself into a greyhound and turned him; and he ran towards the river and became a fish, and she in the form of an otter chased him under water till he was fain to become a bird of the air." "The first part of the legend appears in slightly different forms in the Irish Stories of Finn MacCumhal, and also among the adventures of Sigurd in the 'Song of the Nibelungs.'

I would here venture to quote another reference from Elton which, although a little outside the scope of my paper,

* The hare was frequently found on the land of a farmer whose cattle had been doing badly and things generally going wrong, as the result of the woman having bewitched him. This of course further confirmed the identity of the hare. My informant tells me that the farmer was so obsessed with the idea that he was bewitched that he gave up his farm and migrated to Wales.

has a distinct interest to Dorset, and I refer to it as it affords three instances of a legend, a beverage, and a custom which are still extant, and can apparently be traced back to the hoary ages prior to *Anno Domini*. On page 32 of Elton a quotation is given from the account written by Pytheas, the Græco-Phoenician traveller, about 320 B.C., of his journey through Britain and especially along the Southern coasts. After narrating the customs obtaining in growing and threshing wheat, he adds "they made a drink by mixing wheat and honey," which is still known as "metheglin" in some of our country districts; and he is probably the first authority for the description of the British beer which the Greek physicians knew by its Welsh name, and against which they warned their patients as a "drink producing pain in the head and injury to the nerves." I have known metheglin made at Stour Provost, and the old saying was "that if you got drunk on metheglin you did not get sober for a week," so that the old Greek physicians were not far wrong in their warning against its potency.

I fear that I have so prolonged the first part of this paper that I can only deal with a few instances relating to animal ailments.

Some years since, in going over a farm—I think it was at Holwell, but as it was before I commenced recording these matters I am not quite sure as to the locality—I observed a calf that had been prematurely born placed high up in the fork of an ash bush in the hedge. I asked the farmer what led him to place it there, and elicited the information that if the dead calf was placed in the fork of a maiden ash (*i.e.*, an ash tree grown direct from the seed) and with its head toward the East that it would prevent other cows in the herd from casting their calves. On further enquiry I gathered from the late Mr. J. J. Young, of Pinford, that when he was a boy the custom was quite common in the neighbourhood of Glanvilles Wootton. Also, I heard of a farmer in the neighbourhood of Wincanton who was a great believer in this specific, and if a cow was observed to have been afflicted

in this way all his men had to turn out and walk the farm until the fœtus had been discovered and duly placed in the ash tree.

This is extremely interesting, as it shows that the agriculturists of old had from natural observation forestalled science by many centuries, as it is only in comparatively recent years that scientists have come to the conclusion that this disease in cattle is contagious ; on the Continent and in America they have for many years been endeavouring to find a serum that would protect cows from this complaint, and I believe that our Board of Agriculture has had the honour of carrying off the laurels.

Now, our forebears had found that by leaving a fœtus on the pasture land to be consumed by dogs and *feræ naturæ* it resulted in further trouble with their stock, and they resorted to the very natural expedient of putting it up into a tree out of the way. But note the tree and the position, which affords us some idea of the age and origin of the custom. The ash was a sacred tree of the Druids, especially the rowan tree or mountain ash, known also as the quicken tree, and was used as a specific against witchcraft.* Placing the head of the fœtus to the East points to sun worship, also a Druidical rite. Thus it may reasonably be assumed that this old custom has come down to us from Druidical times, and it appears that these old folk proved by practical experience that by following a very simple act of hygiene their stock was saved from further trouble ; but apparently their sun god had the credit for the cure.

Thus it will be seen that we have traced with some measure of certainty, first a legend, secondly a beverage, and thirdly a custom, which have clung to our countryside and have been handed down to us by tradition from father to son for

* Ash was especially sacred in Scandinavia. The first man was Ask (Ash) and the first woman was Embla (Elm). The court of the gods in Edda was held under an ash tree (Ygydrasil).

Gilbert White relates that in Selborne children with rupture were passed naked through a cleft ash to cure them.

fully two thousand years until the present generation, but these traditions have during the last hundred years been becoming fainter and fainter until they have now almost disappeared.

The following I obtained from Pulham in 1905 : To cure loo'or looser in cows, a disease that breaks out just above the hoof. Find the cow where she is resting early on a dewy morning. Turn her up and mark carefully the spot where she places the diseased foot at the third step. Then cut out the sod and place it uside down in a white thorn bush, and as the sod dries up and dies so the looser will dry up and heal.

Old Mrs. L., of Bishop's Down, who died at the great age of 93 in 1910, had a great reputation for curing the redwater and other diseases in cows. I asked her son to try and find out before she died the nature of her charm. He told me afterwards that he had asked her, and her reply was "Lah ! bless 'ee, I does nothin', only prays the Lord to cure 'em." I don't think that the old lady took any fee for her charm.

My friend W. T. is a great pig breeder, and at times some of his pigs got crippled with rheumatism. He told me that the way to cure this was to cut off the tip of their tails. He said that "it made a tar'ble mess as they bled zo." I suggested cauterising the tips to stop bleeding, but he replied "Bless 'ee 'tis the bleedin' that does the good, as it draas the blood away from their heads." He also told me that when the pig had anything the matter with its lungs the best way to cure it was to open its mouth and make four gashes in its throat. "A pig al'as zwallers everything and never allows it to come out of its mouth ag'in, zo that the blood gets down into its lungs and cures 'em." He could not tell me why four gashes were necessary, but was very firm that it must be four.

At Buckland Newton one day I chanced to remark on some very talkative individuals. The old farmer who was walking by my side soliloquised thus :—

"Ah ! a quiet zow eats up the loud zow's meat ;
While the loud zow is a'squeakin' the quiet zow
fills her belly."

Sometimes one gets a rebuff in attempting to get behind the scenes. One day I was walking round a farm with one of the driest old pieces of "double Dorset" that I know. He began to pour out his troubles as to the losses he had had with his stock. I thought that I had a splendid opportunity to get some folk lore, so quietly asked if he had ever been to the wise woman who I knew lived about half a mile from his farm. He turned on me with this remark : " I dwont believe in any o' they ther' things, nor in vets neither. If they be took vur death they dies, and if they lives they lives." Well, that was Kismet with a vengeance, and I could say no more.

Such are some of the quaint sayings and practices of the farmers and yokels of the recesses of the Blackmore Vale which may still be gleaned as one rambles amongst its well-timbered pastures ; but, alas ! how much has been for ever buried under the new conditions created by the Education Acts.

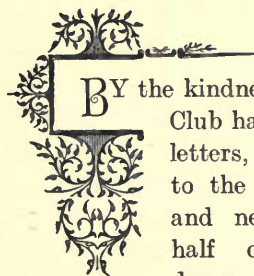




The Silk Industry in Wesser.

- I. THE THROWING-MILLS AT SHERBORNE AND THEIR OWNERS.
- II. DOMESTIC ECONOMICS IN THE EIGHTEENTH CENTURY.

By HENRY SYMONDS, F.S.A.



BY the kindness of Mr. S. Whitty Chandler the Field Club has received a collection of original deeds, letters, letter books, and account books relative to the silk industry carried on at Sherborne and neighbouring places during the second half of the eighteenth century. These documents have enabled me to describe in the following pages the annals of an undertaking which was probably the first of its kind in this county and certainly the longest lived.

Our historian Hutchins tells us that "about 1740 a silk throwster settled here," that is, at Sherborne; but in default of any evidence in support of that date I am inclined to think that the industry was not established until about 13 years later, viz., in 1753.

In September of the last named year John Sharrer, of Little Ayliffe St., Goodman's Fields, in the parish of Whitechapel, silk thrower, acquired the lifehold interest of a family

named Hart in a water grist-mill, dwelling house, and three acres lying in the homage of Westbury within the manor of Sherborne, then held under a lease dated 1728 from William, Lord Digby, upon the life of Sweet Hart, a tide waiter in the port of Liverpool. John Sharrer, having thus gained possession of Westbury mill and having presumably started the silk trade, obtained another lease from Edward, Lord Digby on the 1st April, 1755, for 99 years on two lives, to begin after the death of Sweet Hart. On the next day, Lord Digby and Henry his brother signed an agreement with Sharrer whereby they undertook to grant to him, as soon as certain legal formalities permitted, an absolute lease of the mill and its appurtenances for 70 years, and Sharrer was empowered "to pull down the buildings and to "erect others in their stead for the better carrying on "his business of silk throwing." The existing mill-house at Westbury dates, therefore, from the year 1755 or thereabouts. Sharrer, as we have seen, was a Spitalfields throwster, and his object in thus extending his business was probably three-fold. He had relatives living in Sherborne, there was water power for his machinery, and there was a sufficient supply of labour furnished by women and children, as to which I shall have more to say presently.

The trade having been established and the water-mill rebuilt, the next document to be noticed is a partnership agreement dated 2 May, 1764, between John Sharrer and his two nephews, George Ward of Sherborne, silk thrower, and William Willmott of Hornsey, who followed a similar occupation. It is chiefly round the last named person that this story centres, as Willmott eventually became the owner of the silk mill and developed its business with untiring perseverance. The agreement of 1764 recites that Sharrer, in consideration of the trust and confidence reposed in his nephews, desired to advance them in the world, and therefore accepted them as his partners in the practical working of the business for seven years. We also learn that the uncle had expended more than £2,500 in rebuilding and fitting up

Westbury mill, and other premises in Sherborne leased from Benjamin Bastard. One clause in the deed provides that the said George Ward and William Willmott shall not during the partnership "play at cards, dice, tables, bowls or other "games for more than the sum of two shillings and sixpence, "or bet or lay more than that sum at any such game or at "any horse race or cock match or other sport or pastime "without the previous consent in writing of John Sharrer."

The House of Commons Journals for 1765 tell us a little as to the extent of the new trade in Sherborne. A Parliamentary Committee was appointed to enquire into the condition of the silk manufacture in this country, which had suffered from the large importation of French wrought silks. Among the witnesses was John Sherrard (a misprint for Sharrer), who told the Committee that he was a silk-thrower employing 500 hands in London, 200 in Gloucestershire, 400 in Dorset, and 400 in Cheshire, the total being 1,500 ; of these, 1,400 were women and children and 100 were men. Children were employed at seven years of age. From this evidence I assume that Westbury mill had so far developed its trade in 1765 as to afford employment to 400 persons, indoor and outdoor, at Sherborne and elsewhere in the county, as will appear.

Before the expiration of the partnership John Sharrer died, and it was Susanna his widow who obtained from Henry, Lord Digby on 14 Jan., 1768, an absolute lease of the mill for 58 years, in fulfilment of the agreement of 2 April, 1755. The lessor reserved the right to turn the stream known as the Osborne water out of its usual course, for his own purposes, in seven specified months of each year, and to divert the stream during Saturday night and Sunday from May to October. These reservations may have caused in part the shortage of water power which Willmott mentions from time to time in the correspondence.

After the death of the founder of the industry, George Ward and William Willmott agreed to effect a friendly division of their joint interests, as from 20 March, 1769.

Willmott was to carry on the silk throwing at Sherborne, and at the establishments in Cerne Abbas and Stalbridge, while Ward was to receive as his share the similar undertaking which they had started at Bruton in Somerset, together with the sum of £500. Their agreement for dissolution gives particulars of two of the branch "silk houses" which had been opened in order to tap larger reservoirs of labour. It is recited that Philip White of Cerne Abbas had leased to the late partners in 1764 the building over the shambles in the market place of Cerne called the Isle Hall at a rental of £3 13s. 6d., and we shall see that a silk house, and extensions in that parish, were used by the Willmotts for nearly fifty years. Another recital tells us that Thomas Sampson of Bruton, surgeon, had leased to them, in 1768, a newly-erected tenement (formerly two houses) with the little court adjoining to the Law Way on the south side of High-street, Bruton, where the Swan Inn once stood, for fifty years at a rental of £35. In this town George Ward and his descendants continued the silk throwing for a long period, and were always on good terms with the occupier of the older mill at Westbury. By an assignment of 25 March, 1769, Mrs. Sharrer conveyed to William Willmott her interest in the Sherborne mill and its machinery, in consideration of £1,500.

Having thus outlined, from the documents in the museum, the inception of this Sherborne industry, it will be convenient briefly to describe the nature of the work which provided employment to 600 persons in that part of the county, irrespective of those who worked in competing mills which were started at a later date.

The manufacture of silk fabrics in this country became an established trade about 1585, but it was not until 100 years later that the settlement of French weavers in Spitalfields gave a great impulse to production. The sectional process with which we are here concerned was intermediate between the taking of the raw silk from the cocoons and the weaving of the threads into a fabric. In the eighteenth century the "silkmen," or merchants, and the weavers imported the

skeins from Italy, Bengal, China, and Asia Minor, to a considerable extent through the agency of the East India Company, which held periodical sales of the raw material. The ballots, or bales, of silk were then sent to a throwing mill ; in a few cases the weaver " threw " his own silk, but the more general custom was to employ a throwster, who received a sum varying from 2s. to 5s. for each pound weight, according to the quality of the raw threads and the purpose for which they were to be used.

The term " throwing " is probably derived from the swinging or tossing which the threads undergo when on the machines (*Ure's Dictionary of Arts*), the object of the series of operations being to double and twist the raw silk into more substantial fibres. The initial process consisted of winding the skeins on to bobbins by a mechanism then known as an " engine." Cleaning followed, being effected by passing the thread through a slit small enough to hold any nibs or lumps. Doubling was the next operation, by which the threads on two, or three, bobbins were wound together in contact on one bobbin. In the case of the best silk, the threads were then twisted into a compound strand called " organzine," which was used for the warp in weaving. An inferior quality was thrown into " tram " and twisted in one direction only ; this was used for the weft. A third variety was thrown into " singles," viz., one twisted thread. The throwing or twisting was done by a machine known as a " mill," an improved form of which had been introduced at Derby in 1719 by Sir Thomas Lombe. His patent rights were acquired by the State in 1732, when the apparatus became available for all and was probably used by the Dorset throwsters.

The raw silk which was thus prepared at Sherborne for the weavers had been chiefly obtained from Fossambrone, Reggio, Pesaro, and Friuli in Italy, and from China. Smaller quantities came from Bengal, from Brutia and Antioch, and from Murcia in Spain. Occasional bales were obtained from Ghilan or Sherbaffe in Persia, Legee, Radnegore, and

Pennsylvania, the last mentioned place-name occurring in 1773. I do not find that any French silk was thrown at Westbury mill until the year 1799, when it became plentiful.

It should be added that as the natural colours were white and yellow only, the assistance of the dyer was required before the thrown silk was sent to the weaver's loom. Among the correspondence is a letter dated 21 March, 1778, in which the writer calls Willmott's attention to a specimen or sample of "three thread hard throw" which he was then sending. By good fortune the yellow threads of silk are still attached to the seal of this letter, from which we may see the nature of the material that was thrown.

I will now return to William Willmott, who had become in 1769, as has been shewn, the sole owner of Westbury mill and its outlying dependencies. Although he was described as living at Hornsey in 1764 there is some reason to think that he belonged to a Sherborne family, as I find among the applicants for marriage licences at Wells in 1703 the name of William Willmott, of Sherborne, who may have been either the grandfather or father of our mill owner. In 1641 the surname Willmoth occurs among the residents in that town, and a similar form of spelling can be seen on a few bills paid by Willmott about 1775.

Among our collection of documents is Willmott's earliest "silk book," dating from May, 1769, and containing 153 folios of excellent hand-writing which compares very favourably with the average of the parish registers of that period. This volume is a record of the bales of silk sent to be thrown, and the net result of the process. As the price of the raw material ranged from 25s. to 30s. the pound, and as some of the consignments exceeded 400lbs. each, the aggregate value of the silks in the temporary custody of the throwster was very considerable, and required accurate book-keeping. The condition of the raw silk and the skill of those who handled it governed the amount of waste, which varied between 6 per cent. and 18 per cent. The waste threads were preserved and returned to the owner, excepting the portion

which was termed "invisible," viz., lost, destroyed, or stolen. When the percentage was high there were naturally many complaints.

One of Willmott's chief troubles was to obtain and keep a sufficient number of workpeople for his increasing trade. As I have already mentioned, the bulk of the work was done by women and girls, child labour being used in the more simple processes, such as the preliminary winding. A considerable but unknown proportion of the 250 Dorset women and children who were so employed in 1786, for example, had been in receipt of parish relief, and the Overseers in most cases welcomed the starting of a branch silk-house as conducing to a reduction of the local poor rates. Unfortunately, employment being by piece work was very irregular, and Willmott's letters in times of slack trade draw a sad picture of his workpeople's hardships. On several occasions James Vere and Co., of Bishopsgate, London, who were the best customers of the silk mill, sent ten guineas to Willmott to buy food for the starving children. One such sum was expended in February, 1784, in the purchase of 350 loaves and $11\frac{1}{2}$ bushels of peas, the bill of which is among our documents. The winter was then so severe that communication between Sherborne and Cerne was impossible for some time. To the trials of midwinter must be added the shortage of water-power due to seasons of drought, which also added to unemployment.

On the other hand it must be said that even when silk was in plentiful supply the workers would desert Westbury mill in order to attend the numerous fairs in the town or the races at Lenthay, or to help in the harvest fields. At times the hours of work were very long, continuing through the night when it was desirable to take advantage of a good head of water in the stream. In November, 1781, Willmott remarks in a letter "water now plentiful and shall work seven days a week."

The pay lists or wages books, with two small exceptions, have not survived. Neither of the existing lists is dated, but

the internal evidence assigns them to the year 1793. One contains the names of 48 windsters, as they were called, whose weekly wage averaged 1s. 5d. each; the other list of 18 names averaged 2s. 2d. each. All were females, presumably young girls who were employed at Westbury as out-workers.

It will perhaps be interesting to quote a few extracts relative to the employment of those who by reason of poverty had been under the control of the Overseers of Sherborne and Cerne Abbas. In July, 1776, a vestry meeting was held at Sherborne to consider the question of the workhouse children and the silk mills. Apparently there was some form of bidding between the owner of Westbury and William Cruttwell, who had set on foot a competing business, for the privilege of obtaining the services of the poor. Willmott laments in a letter to Vere that he was unsuccessful, as his opponent had offered a higher price, *i.e.*, wage. Nevertheless, his rival's success was short-lived, as we shall presently see. Another allusion to the same custom occurs in November, 1787, when Mrs. Willmott is informed by Miss Coombs that the Guardians of Cerne had consented to an abatement, during unemployment, of one half of the sum agreed to be paid to the paupers of that district. Again, a letter from Westbury tells Vere in May, 1788, that "as I employ those of the parish I must pay "them work or play, which is very hard upon me, and has been "for many months past, but have kept them on in hope the "trade would take a turn."

By the kindness of Mr. E. Arnold Wright, whose firm, A. R. Wright and Company, bought in 1907 the silk mills owned by several generations of the Willmott family, I have been enabled to inspect two letter books, 1772 to 1781, which were not included in the collection given to the Field Club. The outward correspondence, copied by hand in these books, includes many touches of local colour which enliven the somewhat dull records of silk received at Sherborne and returned thence to London; I will therefore cite a few incidents mentioned in William Willmott's letters. At the beginning of 1773 the silk industry languished throughout England,

and Willmott had to discharge many workpeople, who became a burden to the town. In order to preserve his connexion among the weavers and merchants he often sent presents of game which had been shot by his friends. For this form of sport he had no liking ; but he remarks in 1773 that " hunting is my delight ; but, although near it, I seldom enjoy it," referring, no doubt, to the Blackmore Vale Hounds. In February, 1774, he says that the other throwsters had been shut up entirely for some time (this is the earliest mention of competitors), and he fears that his friend George Ward may have to do the same thing. A letter of a few weeks later offers to buy Ward's machinery at Stalbridge and to pay the rent of the silk-house there, as he wanted more winding engines. (It would appear from this that the terms of dissolution had been varied, and that Ward had taken the Stalbridge branch.) In November, 1774, Willmott bought for £135 the appliances and tools of Fooks and Webb, of Sherborne, and so put an end to a "long-contested opposition." He tells Vere that by this increase he hopes to return to them 500lb. of thrown silk every week, which gives us a measure of the capacity of Westbury mill and its satellites. At the same time he comments on the anxieties attaching to a large undertaking with a comparatively small capital. In the early part of the year 1775 Willmott had a serious illness, during which the mill was supervised by John Sharrer (a son of the deceased partner), who was then an undergraduate of Queen's College, Oxford. Shortly afterwards the letters contain references to further opposition organised by George Smout and his wife, who appear to have been the stormy petrels of the Sherborne silk trade for nearly twenty years. I read that in August, 1775, W. Cruttwell and T. Stidson, the latter of whom owned a grist mill in the town, were making ready to throw silk instead of grinding corn, being prompted thereto by Smout. Willmott expresses the fear that he would lose some of his hands and be unable to keep his mills fully occupied ; the event proved the correctness of his anticipation.

In the year 1776 several letters passed between the owner of Westbury and Thomas Sharrer (another son of Thomas Sharrer, deceased) on the subject of the Throwsters Company in London. Willmott desired to become a member of the company, and asked Sharrer to find out whether they intended to put in force an Act of Parliament which regulated the trade and prohibited anyone from practising the "art and mystery" until a seven years' apprenticeship had been served. This statute became law in 1662, but had apparently fallen into disuse before the period now under consideration. It is obvious that a strict enforcement of the provisions of the Act would have suppressed much of the competition by grist millers and others who possessed the needful water-power, but had no knowledge of the craft which Charles the Second's Parliament had intended to protect from untrained rivalry.

The Silk Throwsters' Company had been incorporated by letters patent in 1629; but it had neither Hall nor Livery, and no longer exists as an active organisation. It is not mentioned in books of reference after 1870-75, consequently I have not been able to find the present custodian of its records for the purpose of enquiring whether Willmott's name is entered on the roll of freemen. The charter and by-laws, however, are now in the care of Mr. W. B. Ingle, the upper-bailiff of the Weavers' Company.

The Silk Throwers, as was the custom, received a grant of Arms, the terms of which do not appear to have been hitherto printed and may therefore be quoted here :—

State Papers Domestic (Charles I., vol. 147). Document No. 38 in this volume after reciting a grant of 23 April, 5 Charles I., whereby Robert Bollinge and others, then exercising the trade, art and mystery of silk throwing in London and the suburbs thereof, had become a body politic and corporate, proceeds as follows :—And Clarenceux, King of Arms, being requested by Robert Bollinge, the master, and Thomas Lorde and William Harte, the wardens, to grant to them some ensigns and badges of honour for their use, thereby granted to the corporation arms, crest, supporters and seal. *Party per fesse azure and vert, on the first a silk mill or, on the second a London throw of silk between two bundles*

of Naples proper, mantled gules doubled argent. On a wreath or and azure, a mulberry tree with divers silk worms feeding on the leaves all proper. For their supporters, on the dexter side a Persian with a mass of raw Legie silk on his arm and on the sinister side a Turk with three masses of Ardasse silk under his arm, both in their proper habits. The words ; "God in his least creatures." For their seal, a silk mill encircled with a ring, in the same these words, "The seal of the corporation of silk throwers, London," as in the margin is more plainly depicted. [The sketch is missing.] These arms, crest, supporters and seal are granted, ratified and confirmed to the said master &c. Dated . . . July, 1629.

The allusion to the silk worm in the motto of the company reminds me that many unsuccessful attempts have been made to rear this creature in England, notably by James I. and Charles I. in the royal mulberry gardens at St. James's.

Reverting now to Westbury mill, the opposition which had developed in Sherborne in 1775 seems to have been an unlucky enterprise, as Cruttwell retired in February, 1777, leaving Smout to manage the Abbey silk mill. Willmott mentions with pardonable satisfaction that his former work-people were then returning to him, as employment was too precarious elsewhere.

During Whitsuntide, 1778, a new water wheel of much larger size was erected, and this improvement was followed in 1781 by the addition of a horse mill and a house for the horse walk ; by this appliance Willmott was enabled to drive half of the machinery when the water power was insufficient.

It should be observed that the trade, notwithstanding its fluctuating and exotic character, was singularly free from losses by bad debts. During a period of a quarter of a century I can trace only one defaulter, a fact which speaks well for the stability of the weavers and silkmen who were the mainstay of the Sherborne business.

At that time, as now, Britain was at war, and a few side-lights are thrown upon the situation in Dorset. In August, 1779, Vere was apprehensive about a reported landing by invaders from the French and Spanish fleets then off Plymouth, and he hoped that the enemy would not reach

Sherborne. All silk on the roads was to be stopped and the necessary precautions taken. In the following month Willmott reports that the French prisoners had been removed from the West for greater security, and that 1,000 had passed through the town on their way to Winchester. Another letter tells us that in March, 1780, the whole regiment of Dorset Militia was quartered at Sherborne, an event which had not happened since the last war, and that the work-people would probably be disturbed by the presence of the soldiers. It had been customary to ship hogsheads of Cerne Abbas ale from Weymouth to the Thames; but the activities of the French and Spaniards in the Channel induced Willmott to send such gifts by the land route to London. In the same connection Vere remarks that no Turkey silk would be forthcoming for a long time, owing to the absence of any convoy in the Mediterranean.

I will next cite an illustration of one of the social customs then in vogue at Sherborne. Willmott desired to celebrate the christening of his son Thomas in January, 1779, and being anxious to entertain his guests in the best manner he asked a friend in London to obtain and send down the following provisions :—

Four quarts of real turtle soup from Horton's by the Royal Exchange; if it cannot be had, then the same quantity of mock turtle. A fore-quarter of the best house lamb to be had. A turbot of 14lbs. or 15lbs., or if not obtainable, then a fine cod fish."

(Unfortunately the bills for this repast have not been preserved.)

The competing mill is again mentioned in the spring of 1781, when Mrs. Smout writes to Willmott expressing a wish for his friendship. He consents to a meeting, but pertinently reminds her that she had recently visited two of his outlying silk-houses and had then offered to the children an additional sixpence per week if they would leave his employment. Such an action was perhaps not the best foundation for a pleasant relationship between neighbours.

A few lines may be devoted to the silk-houses in other parishes, which acted as feeders to Westbury mill. One of

these winding factories was at Bradford Abbas in a house owned by William Deering. The first mention of this establishment occurs in June, 1779; but it was probably started at an earlier date, as the series of account books is not complete. The latest reference to Bradford is in February, 1784.

Another silk-house was in Dorchester; but I have been unable to identify the site of the factory. The earliest entry referring to the county town is in June, 1780, when money for wages was sent there from Sherborne. Fifty persons were employed in 1784, and I read in a letter of July, 1788, that "my hands at Dorchester are standing still at my expense" for want of silk. Here, also, some of the work-people were "those of the parish," who were paid whether they worked or stood idle. The existence of this industry in Dorchester seems to have escaped the notice of the historians of the eighteenth century.

The house at Cerne Abbas has been already mentioned in the foregoing pages, and there is no doubt that silk winding was continued, with varying fortunes, until about 1810 or even later. In November, 1780, Willmott bought from "farmer Cockram" for £70 his interest in certain premises in that parish, which were presumably an addition to the accommodation at the Isle Hall. In every week wages money was sent to Cerne and Dorchester, the amounts averaging about £10 to £12, of which the former place probably absorbed the larger share. Each of these silk-houses was placed in charge of a mistress, and the appliances used are described as "Spanish engines," which did not require water power.

At present I have quoted extracts from the two letter books (1772-81) in the possession of Mr. Arnold Wright, and from the original letters of the same period which are in the collection at the Dorset County Museum. I will now turn to our letter books which begin in 1782.

Silk-throwing had been established in Taunton at a mill on the Sherford stream, a tributary of the Tone, and Willmott had helped the owners, Paul and Vansomer, in

April, 1781, by lending to them an "engine mistress" and others to instruct the Taunton hands in the new trade. This kindness was but ill repaid, as Paul is reprov'd in March, 1783, for having improperly tried to obtain workpeople from among those engaged at Westbury mill.* When Willmott wrote this complaint he certainly had no idea that within twelve month he would be in control of the Taunton undertaking. The new departure by Paul and Vansomer having proved to be unsuccessful, it was suggested to Willmott that he should acquire the mill. At first he declined, on the ground that the distance from Sherborne was too great, but subsequently he decided to buy the mill and machinery in Upper High-street, Taunton, in conjunction with John Norman of that town. The purchase was arranged in November 1783, for a sum of £1,050, and the new partners began operations at once. In May, 1784, there was a local scarcity of labour owing to the flourishing state of trade since the peace with France, and in October of the same year there is a reference to bull baiting in Taunton which had interfered with the attendance of the workpeople. As the correspondence relates chiefly to matters within the county of Somerset, it is perhaps outside the scope of this paper, and it will therefore be sufficient to say that Norman and Willmott started a winding house at Chard, and another at Coombe St. Nicholas, of a similar character to those in Dorset.

Returning to the main story at Sherborne, I find that Willmott writes to a Mr. Fisher at Dorchester in October, 1783, concerning a fire policy for Westbury mill, saying that he had insured with the Sun Fire Office for more than twenty years. The new policy was to be for £3,000, comprising the mill £750, dwellinghouse £500, machinery and silk in trust £1,500, and sundry smaller items.

*There is a very nice letter from two mill hands at Taunton in March, 1783, warning Willmott as to what was going on there.

Small pox was prevalent in Sherborne from time to time. A great number of the children were ill about February, 1785, and the parents were nursing them, consequently very little silk could be returned to London. Inoculation was refused by the parents, but Willmott endeavoured to protect his own household by means of that preventive.

The spring and summer of 1785 were unusually dry, and the town had been without a whole day's rain since the previous November. This drought proved the utility of the horse-mill, which was working for three consecutive weeks in June of that year. Hay then cost £6 the ton, and was very scarce.

Nothing worthy of special notice occurs during the next two years; then we learn that William Willmott died from a fever on 2 June, 1787, leaving a widow and seven children.

A brief reference may be made to Willmott's position in Sherborne, apart from the silk industry which he so successfully developed. I am indebted to our member, Mr. W. B. Wildman, for having supplied many of the following particulars. William Willmott was elected a governor of Sherborne School in 1769, and became a Brother (*i.e.*, a governor) of the well-known almshouses in the same year.* He was chosen as warden of the school for the year 1784. His son Thomas (of whom more presently) entered the school in 1779, was elected a governor in 1805, and warden in 1810. Altogether, seven members of the family were educated at the school. William Willmott was also a guardian of the poor for many years, and was associated with a philanthropic organisation known as the "Green Girls Society," which still exists under the name of Lord Digby's school, although the girls no longer wear the dresses of distinctive colour. Among our papers is a printed sheet or leaflet dated 26 October, 1786, which refutes a malicious report to the prejudice of the society and sets out its position and aims. The treasurer, John Toogood, informs

*A bill for a dinner and a supper to the masters of the Almshouses is dated 30 Dec., 1785, £6 6s. 1d.

the public that the funds then amounted to £439 3s. 3d., and complains of the wrongful removal of a tablet and a box for donations which had been placed in the south aisle of the abbey church in the year 1771.

I find that Mary, the widow of William Willmott, arranged to continue the throwing mill until her sons were old enough to relieve her of the management. One of Mrs. Willmott's first steps was to sell to John Norman her husband's half share of the Taunton mill, and if we may judge from the amount paid to Willmott's executors the Somerset undertaking had been a profitable venture. The branch silk-houses in Dorset remained unchanged.

On 9 June, 1787, an inventory was made of the effects at Sherborne and elsewhere, from which I have extracted the following particulars as to the appliances, &c., used by an eighteenth century silk-thrower.

Westbury mill—

In the workshop on the ground floor,

10 pair of compleat mills, 3 silk bins, 1 silk press, 1 beam and scales.

In the second floor—

4 pair of compleat mills, 1 dumb mill, 5 engines compleat. 3 bins.

In the upper floor—

1 spinning mill, 8 engines compleat, 2 bins.

In the Tram shop—

1 beam and scales, 43 Tram wheels compleat with stools, 1 iron stove, 4 bins, 11 trays.

(There were also 126 baskets in which the wrought silk was returned to the owners. This method of packing had been first introduced by William Willmott, the baskets being made locally.)

Setts of tools with outdoor windsters in Sherborne, Cerne and Pointington, 240. (I have not found any other reference to the last named parish.)

At the work-house at Cerne—

32 wheels, 27 rices and runners, 31 Spanish engines, 1 chest, 1 beam, scales and weights, 6 basketts.

At the work-house at Dorchester—

35 wheels, 35 engines, 4 rices and runners, 1 chest, 1 beam, scale and weights, 20 basketts.

The year 1787 was marked by the failure of the silk crop in Italy, which entailed a serious loss to English mills and

especially to Sherborne, where Italian threads were largely worked. Vere says that the weavers were putting down their looms, and prophesies that in six months half of the mills in the kingdom would be standing idle. Other correspondents in London warn the Willmotts not to employ their people on full time, but rather to go slowly in view of the deficiency in raw materials, and Vere adds that 250lbs. to 300lbs. per week of all sorts must be their limit.

At this point the account books furnish us with a definite statement as to the sums expended in wages. To cite an example—it appears that between June, 1789 and the same month in 1790 the payments for wages averaged approximately £46 per week; the highest amount was £112 and the lowest £22, the latter representing Christmas week. The “neat profit” of the trade during the same twelve months was £863; but this was not the high water mark, as some years were more prosperous.

The year 1791 showed a favourable turn of fortune’s wheel. The mill at Westbury was working at high pressure, and many new offers of silk were refused. On the margin of an account book for July, 1791, is written *Temps trop heureux pour durer longtemps*. Two years later there was a collapse of the chief opposition in Sherborne. The correspondence shows that in April, 1793, Mrs. Willmott was asked to help several London firms whose silk remained unfinished at the Abbey mill, or at its outlying silk-houses in Ilchester, Bradford, and Tintinhull. Mrs. Smout now disappears from the town, and the scene of her activities was sold to “people who are entire strangers to the business,” thus proving that the stipulation in the Act of 1662, to which I have already referred, was still ignored by the Throwsters’ Company. John Willmott had intended to buy the vacant workshops; but they were sold, as he says, at an unreasonable price. I am again indebted to Mr. Wildman for a few details which show how the later history of the Abbey and the School and the mill is interwoven. It appears that a part of the Abbey silk mill formerly occupied the guest house of the monastery;

in 1853 it was converted into the big schoolroom, and is now used as the school library. Also, a portion of the existing school chapel was once used for the purposes of the silk mill.*

The severity of the winter season in January, 1795, caused "incredible hardships" to Mrs. Willmott's workpeople, notwithstanding the benevolence of the inhabitants of the town. Vere sends a sympathetic letter, with another gift of ten guineas for food; in the following month he reports that raw silks would not come from foreign countries for some time "in consequence of the embargo laid on all shipping," a situation which almost finds a parallel in the year 1916. Bread was 1s. the loaf in Sherborne during the summer of 1795.

Happily, those days of vanishing wages and high prices were followed by a period when silk was plentiful and earnings regular, as may be inferred from a letter written to Vere in March, 1799. Thomas Willmott tells his friend that he had recently erected a large engine in the winding house at Cerne, and was about to put up another of a similar kind; that he had taught the hands at Cerne to "tram" fine silk, which they had not previously done, and that he would shortly be able to return a larger quantity than ever before. All this speaks of flourishing trade, and the next letter indicates that an extension to a new district was contemplated. On 27 November, 1799, Thomas Bartlett writes from Evershot to Mrs. Willmott saying he was told that she wished to establish a silk manufactory in the town, if sufficient work-

*At the beginning of the 19th century the Abbey mill was occupied by a throwster named John Gouger or Genger. In this connection Dr. E. K. Le Fleming has kindly sent to me an extract from the parish books of Wimborne—

Dec. 16, 1817. Resolved at a Vestry that "The children and other persons in the workhouse shall be employed by Mr. Genger of Sherborne in the winding of silk," at the same price as paid locally. Mr. Genger was to "find gratis the machinery necessary for carrying on the concern."

people could be obtained. He thought that it would be a good thing for the industrious poor, and offered to let to the Willmotts a building of two floors 93ft. by 18ft., well lighted. The letter book does not contain the answer to this proposal, nor can I trace any further reference to Evershot in the documents.

At the beginning of the new century Mrs. Willmott took her second son, Thomas, into partnership, as from December, 1800. Westbury mill and its various offshoots continued to prosper under the guidance of the new firm, so much so that Thomas Willmott acquired in June, 1809, for the purposes of his trade, the water grist-mill known as the Castle, or East, mill in Sherborne. In March, 1814, he bought from William Burnet the mill known as Oke's, or the Middle, mill, also in Sherborne, together with all the machinery and tools therein used for silk throwing. The original deeds relating to these purchases are included in our collection. It seems probable that the William Burnet who sold Oke's mill to Willmott in 1814 was the buyer (either alone or with others) of the Abbey mill in 1793 when it passed from Mrs. Smout's control.

The letter and account books and the correspondence come to an end soon after 1800, but a few particulars as to the subsequent history of the undertaking may be extracted from the Proceedings of a House of Commons committee which enquired into the condition of the silk trade in April and May, 1832. Thomas Willmott was then chosen to give evidence as a representative mill-owner, as had been the case with his great-uncle, John Sharrer, on a similar occasion in the year 1765. Willmott tells the committee that he had been engaged as a silk thrower in Sherborne for 32 years, one of his mills having existed for 80 years and two others for about 20 years; that before 1826 (when protective duties were in force) he had 8,000 spindles at work and 600 hands, at the time of the enquiry the spindles were 3,000 and the workpeople 150 only: about two-thirds of the hands were winders at home, and one-third worked in the mills: half

of them belonged to Sherborne, the wages paid to girls being 5s. per week and to children 1s.: Italian silk was chiefly worked, and the witness was of opinion that the throwing trade could be restored only by reinstating the former duties on imported wrought silk. John Sharrer Ward, of Bruton, also gave evidence to a similar effect.

The undertaking ultimately passed into the possession of Mr. Albert Willmott, a son of John Willmott; but the changed conditions of trade, which compelled the throwster to buy his raw silk and find a market for it when thrown, proved too heavy a burden for the owner. Consequently a limited liability company (J. and R. Willmott, Ltd.) was formed about 1885 under the guidance of the late Mr. B. Chandler and the Rev. J. Ogle, in order to avoid the threatened loss of employment in Sherborne. The new Company substituted silk weaving for throwing, and happily turned the tide. After twenty-one years working, the mill was purchased by Messrs. A. R. Wright and Co., in 1907, as previously stated. As a matter of fact, the original Westbury mill is no longer used for the purposes of the silk trade, which now flourishes in a large building erected by the Willmotts about 1840 on the opposite side of the road. The old mill, which has a picturesque garden alongside the river, now serves as a builder's warehouse and workshops.

The foregoing notes necessarily relate only to Sherborne and its offshoots; but Canon Mayo has described in S. and D. N. and Q. (Vol. XIV., pp. 289 and 329) the history of a similar undertaking at Gillingham, Dorset, from the time of its foundation in 1769.

II. DOMESTIC ECONOMICS IN THE EIGHTEENTH CENTURY.

Among the collection of Sherborne papers is a parcel of receipted bills of various dates between 1773 and 1800, some of which relate to the silk mills and others to the household expenditure of the Willmott family. From these bills and

from the account books it is possible to gather some first-hand information as to the incidents of daily life in a country town during that period, and as to the cost of necessaries and certain articles of luxury. It is not practicable, however, to discuss or print in these pages any considerable number of the documents in question, but it may be useful to comment upon a selection from them. All the names are those of inhabitants of Sherborne, except when the contrary is stated. The earlier portion of the local tradesmen's bills are written on plain sheets of paper, sometimes on mere scraps, and it is not until February, 1789, that I notice a printed heading on an account. In that month Robert Winter, a mercer, used a bill-head impressed from an engraved steel plate, not from printer's type.

COMMUNICATIONS.

The ordinary method of conveying merchandise to and from Sherborne was by wagon, the journey between that town and London occupying about four days. The earliest carrier mentioned is John Andrews, but he was dilatory and was not employed by Willmott after 1773, when Edward Hatherell's wagons began to carry the baskets of silk along the London road. In 1777 Hatherell died and was succeeded by his daughter Sarah until she gave up the business in 1783. Subsequent owners of lines of wagons to London were :—Chafie and Pittard in 1783 ; they started on the homeward journey from the Swan at Holborn Bridge. Andrews, also in 1783 ; he started from the Saracen's Head in Friday Street, London, and his bill for August in that year was £10 9s. Whitmarsh, Brown and Burge succeeded Andrews in May, 1785. In 1799 Adams's wagons were used. In 1802-3 Woolcott's wagons carried the silk.

The carriers between Bristol and Sherborne were as follows :—Robert Oke, 1775 ; Hart, 1782 ; Wiltshire, 1785 ; John Beale, 1788-91.

For more speedy travelling to London the stage coach, sometimes spoken of as "the machine," was used, but there was apparently only one such service available in 1780-85, when Lilley's Taunton coach passed through Sherborne on three days in the week.

Chaise hire to Weymouth and home on the next day cost £1 11s. 6d.; the same to Dorchester and back on one day, £1 1s. 6d.; "chaise airings" were 3s. 6d. each, and a saddle horse to Dorchester and back, 5s., as may be seen in Beale's and Oke's bills for 1775 and 1788-9 respectively.

During a visit to London William Willmott bought a carriage from John Sargent, of Great Queen Street, a district which is still favoured by coach-builders. The account runs thus :—

	£	s.	d.
1782. June 8, To a new post chaise,	63	0	0
To a new pair of harness, with hames, collars, polished bitts and a postillion saddle.... ..	9	9	0
	<hr/>		
	£72	9	0
	<hr/>		

The new vehicle necessitated a further outlay of £7 19s. for chaise and servant taxes, no inconsiderable item. In the same year a horse "warranted sound" was acquired for £8 18s. 6d., and afterwards "a little horse bought for Jack W." (the eldest son) was added to the stable at the price of £3 3s. Willmott made many journeys on horseback to Chard and other outlying silk-houses, notwithstanding the additional purchase of "a new one-horse chaise complete" from George Hewlett in 1784, at a cost of £29 8s.

EDUCATION.

Although several of the sons and grandsons of William Willmott were educated, as already mentioned, at Sherborne School, there are neither documents nor payments which

can be identified with that foundation. There are, however, many references to other schools, of which the best known is undoubtedly the old grammar school at Crewkerne. An account book for July, 1781, contains an entry of £4 4s. paid to the master, Mr. Ashe, presumably for a half term only. Then we have an original bill signed by (the Rev.) Robert Ashe for a term's fees from June, 1783, for John Willmott. The half-year's board and tuition amounted to £8 8s., and the total to £10 15s. Some of the extras and the vouchers attached to the account read very quaintly to-day.* Another school for boys was that kept by the Rev. J. Toogood, of Sherborne, who taught John and Thomas Willmott between 1786 and '88. The fee for board and tuition in the last named year was £13 13s. for one pupil for the half-year. Among the books which were used I notice Sallust, Virgil, Terence, and Hugo Grotius. There were other private schools in Sherborne, one being carried on by Charles King, a writing master, who charged £1 4s. per annum for instruction, and 1s. 6d. weekly for dinners supplied. Another son went during 1791-92 to Philip Ahier's school at St. Manelier, Jersey, where several Dorset families educated their boys; the fees for boarders were £16 16s. per annum.

The cost of the girls' education sometimes exceeded that of their brothers. Mrs. Morris, of Weymouth, who was teaching two daughters of Willmott in 1785-86, charged £19 19s. yearly for each pupil, *plus* the additional accomplishments then in vogue. The bills from Mrs. S. Warwick, of Sherborne, show that her fee was £14 14s. per annum for board and tuition in 1789.

Dancing was taught by Mr. Peironnet, and music by Thomas Hyde. The latter sold to Willmott in 1786 "a three stop harpsichord of Kirkman's" for £29 8s.

* A history of Crewkerne School was written in 1899 by our member, the Rev. R. G. Bartelot.

It would appear from a memorandum on the back of a letter stamped 1796 that the education of the three daughters cost £520, or thereabouts.

CLOTHING.

There are many accounts relative to wearing apparel of all kinds, from boots to headgear. I will transcribe two examples of a tailor's bill of the period, to illustrate the current fashion for a well-dressed inhabitant of Sherborne. It must, however, be confessed that Willmott did not buy his best clothes in his native town, but went to London or elsewhere for them.

1781 July 10th. To Benedict Shield (address unknown).

	£	s.	d.
A superfine cloth coat with solid plated buttons, ...	3	3	0
A fine dimity waistcoat, double-breasted and fringed,	16	0	
A sattin stript waistcoat, double-breasted and silk linings,	1	10	0
	<hr/>		
	£5	9	0
	<hr/>		

The second account reads thus—

1782. 5 June. To John Boucher (Leadenhall Street, London).

	£	s.	d.
Making a light cloth coat, a double-breasted silk waistcoat and black silk breeches ; trim'gs. to d°. ...	1	18	0
2 $\frac{3}{8}$ yards sup. cloth, at 19s.	2	5	1 $\frac{1}{2}$
1 $\frac{7}{8}$ yards rich fig'd silk, at 15s.	1	8	1 $\frac{1}{2}$
2 $\frac{1}{2}$ yards rich sattin Florentine, at 12s.	1	10	0
Silk serge to the waistcoat forebodys,... ..		5	0
Shalloon to the back,		1	6
14 solid plated shank buttons,... ..		6	0
	<hr/>		
	£7	13	9
	<hr/>		

I regret that a man's incompetence prevents me from quoting parallel examples of the ladies' adornments as set forth in the milliners' bills.

HOUSEHOLD MATTERS.

There is very little information as to articles of food. This may be due to the fact that for many years a weekly sum of five guineas was devoted to housekeeping expenses, which would presumably be defrayed in ready money and would not appear among the accounts. Among the stray items are lump sugar at $8\frac{1}{2}$ d. and butter at $7\frac{1}{2}$ d. the pound, both in 1776. Nevertheless there is no lack of details concerning purchases of alcohol in almost every form, as might be expected in Georgian times. A pipe of port, costing about £42 in the 'eighties, was stored in the cellar at Westbury on more than one occasion. Another favourite beverage was X ale brewed at Cerne by Thomas Coombs, a hogshead of which represented 75s. in the year 1775, and 70s. in 1782. On the other hand, tobacco is scarcely ever mentioned ; I noted only one instance of its use, and the quantity was quite trifling.

Although some domestic articles show little difference in cost when compared with modern prices, the wages of maid servants were then on a much lower scale. A cook of five years' standing received six guineas per annum, with one guinea for tea, in 1789, and another maid was paid £4 10s. without the solace of tea-money.

The bills from Sampson Boys, surgeon and apothecary, are among the longest in the series, but apparently they do not include his fees for advice or treatment. The earliest begins in 1774, and proves that a surprising quantity of medicine was supplied to Willmott's family, almost daily, in fact. Dr. Cumming and Dr. Johnson are mentioned in 1775 ; presumably they were physicians in Sherborne. An account book records that Boys inoculated the household in January, 1782, during one of the periodical visitations of small-pox. John Melliar was a later surgeon whose drugs were frequently in demand throughout 1792-94. On the back of a letter dated 27 Nov., 1779. are three curious recipes for the cure of the ague, the itch, and a sore throat.

Lighting was entirely by candles or rushlights, the latter being used in the night. The candle bill for the winter months averaged about £40, but the greater portion of the supply was consumed, of course, in the silk mill. Coal cost about £2 2s. the load, the weight not being stated. Lamps were not used in the mill until 1800.

I find purchases of prints from John Boydell, in Cheapside, and of table silver and condiments from other London shops ; also an Irish lottery ticket dated 1786, and a reference to a similar ticket which was bought for £16 12s., both apparently were unlucky.

THE POST OFFICE.

A few notes on postal matters may not be out of place. Envelopes being then unknown, each letter-sheet bears on the back the amount of the postage written in ink, together with the date stamp and the address. The postage between Sherborne and London for a single letter (that is, one sheet not exceeding an ounce in weight) was 4d. in the years 1776 to 1784. In the last named year the charge was increased to 5d., and again to 7d. on letters of 1799. The postage was always based on distance, thus, from Chard to Sherborne was 3d. and from Jersey 5d. The recipient of a letter almost invariably paid the postage ; in one case an irate silk-weaver debits Willmott with the cost of " three unnecessary letters " as a warning. As a matter of fact, the proportion of prepaid correspondence is less than three per cent. of the whole, the post office allowing either course to be adopted. It would seem, therefore, that the symbols used to indicate prepayment are not without interest, since they are " postage stamps " in the literal sense of the phrase which now denotes an adhesive label. Two varieties of such symbols occur on our correspondence. The first, which was used in 1786, is a triangular stamp in black ink bearing the words " Paid penny post," with sundry letters in the centre ; the latter

may be for identification purposes. The stamp is not dated. The penny was charged for one stage, the length of which was undefined.

The second prepaid mark is found in 1793 and in 1800. It is a large circular stamp in red ink (about twice the size of the ordinary date stamp) bearing the word "paid," together with the date of posting. There are also two forms of date stamp. Until May, 1787, the day and month only are impressed, but afterwards the last two numerals of the year are added.

FINANCIAL ARRANGEMENTS.

The method by which the requisite amount of small currency was obtained for the payment of the workpeople, who were numbered by the hundred, deserves a passing notice. In the middle of the eighteenth century the inhabitants of country towns were not able to avail themselves of the services of a local banker, and consequently had to rely on their own resources. At Westbury mill, and probably elsewhere, the procedure was as follows. When a consignment of raw silk had been "thrown" and returned to the owner it was always the custom for the throwster to obtain payment by drawing a bill of exchange on his customer, at thirty days sight, in favour of some person who happened to be possessed of a sufficient quantity of current coin. This individual "changed the draft," as the phrase was, at a uniform rate of discount of 5 per cent. per annum, and obtained the proceeds of the draft through an agent in London. Two of the tradesmen, Robert Winter, a mercer, and Benjamin Vowell, a wine merchant, were the chief sources of supply, but the clergy, the attorneys and the doctors of Sherborne occasionally helped to provide the gold, silver, and copper for wages at the silk mill. Thus the money so expended continued to circulate in the town, week by week. At a comparatively early date Sherborne was fortunate in having a resident banker in

the person of Simon Pretor, who also filled the the office of postmaster. His name occurs in 1786 in connection with a transaction such as I have just described, and it is evident that in the next year William Willmott kept an account with the "Sherborne and Dorsetshire Bank," although the old method of procuring wages-money still continued.

Simon Pretor came to Sherborne from Lyme Regis in the middle of the eighteenth century and established the Bank in his house in Long-street. His partners were his three sons-in-law, Richard Pew, Samuel Whitty, and Samuel Gill, the firm being known as Pretor, Pew and Whitty (*cf. Proceedings* vol. XXIX p. 83). After the death of Richard Pew without issue, Samuel Whitty took into partnership his son-in-law Benjamin Chandler, the style then being altered to Pretor and Chandler. The firm remained unchanged until 1850, when the National Provincial Bank absorbed the old institution and continued the business in the original house. Mr. S. Whitty Chandler, to whom the Field Club is indebted for the collection of Sherborne documents, is a direct descendant of Simon Pretor.

LAW.

There are several attorney's, or, as we should now say, solicitor's bills for law costs. Samuel Foot acted as the adviser of William Willmott in 1769, and John Foot was Thomas Willmott's lawyer in 1794. A quaint feature of these bills is the inclusion of sundry items for oats and barley supplied to the client, and entered alongside the fee for preparing a conveyance or a lease.





Australian Trees and Shrubs.

By Sir DANIEL MORRIS, K.C.M.G., M.A., D.Sc., D.C.L.,
F.L.S.



IN a study of the Trees and Shrubs in cultivation along the South Coast of England it is recognised how largely the Southern hemisphere has been drawn upon for some of the richest of the botanical and horticultural treasures of our parks and gardens. Among these possibly the most interesting are those of Australian origin.

Australia, as is well known, is a vast island continent in the southern hemisphere. It is about three-fourths the size of Europe. Amongst geologists it is regarded as presenting, probably, the oldest land surface on the globe, and both its native

animals and plants are practically unique in their character and of great scientific interest.

AUSTRALIAN CLIMATE.

The western half of the Australian continent is a vast plateau, with stretches of sandy deserts possessing an arid climate. The eastern half is more undulating and less dry, with rivers, harbours, and a richer fauna and flora. The outstanding feature of the Australian climate is no doubt its comparative dryness. About two-fifths of the continent receives less than an average of ten inches of rain in the year. The rest may be considered as fairly well watered, having a general fall of from 30 to 40 inches. In regard to temperature, the general law is that the climate of Australia is milder than that of corresponding latitudes in the northern hemisphere. As the seasons are reversed, we are not surprised to learn that the coldest month in Australia is July. We may assume that the southern half of Australia has a mean temperature ranging from 45deg. to 61deg., and the other half from 62deg. to 80deg. In comparing the former figures with those of the southern counties of England, we find as the result of thirty-five years' observations by the Meteorological Office that the average yearly temperature along our coast, say, from Plymouth to Eastbourne, is very nearly 50.4deg.; while the average annual rainfall is twenty-four inches. This would give a somewhat approximate resemblance between the climate of our southern coast and certain portions of New South Wales, Victoria, and Tasmania. In the mountains of the latter the winters are possibly as severe as anything in southern England. Owing to the relatively warm ocean currents setting into the English Channel the air along the south coast is probably the softest in Britain, and when to this is added a moderate rainfall and an abundant sunshine we have a possible key to the favourable growth of sub-tropical plants from Australia and elsewhere.

INTERESTING LOCAL GARDENS.

As regards Australian plants, we are fortunate in this neighbourhood in being in close touch with several very interesting gardens. There are two I might specially mention where Australian trees and shrubs have been under careful experimental cultivation for many years. The first of these are the well-known gardens attached to Abbotsbury Castle. They contain one of the largest private collections of sub-tropical plants to be found, if we except Devon and Cornwall, in any part of the British Isles. Here, during the last hundred years, successive Earls of Ilchester have brought together and cultivated with singular success the most attractive representatives of the floras of temperate and sub-tropical countries, showing what thoughtful selection and wide and intimate knowledge of plants are capable of producing. Speaking of these gardens in a recent letter received from so distinguished an authority as Sir Ray Lankester, he says "the Abbotsbury gardens are about the most interesting I have ever seen." In a catalogue of 115 pages prepared by the Dowager Countess of Ilchester in 1899, there are recorded about three thousand names of trees, shrubs, and herbaceous plants from all parts of the world which were then growing in the gardens. I can make no attempt to describe them here. I must confine attention within the limits of my subject—that is to trees and shrubs of Australian origin.

Another interesting garden, but of very modest dimensions as compared with Abbotsbury, is that established in recent years at the Old Orchard, at Broadstone, by that illustrious man of science, the late Dr. Alfred Russel Wallace, O.M. Although since his death it has not been found possible to maintain the garden in anything like its former high standard of cultivation, it still contains a large number of rare sub-tropical trees and shrubs. I have a list of about forty species I made on the occasion of a visit to the garden, by permission of Mr. W. G. Wallace, early in January, 1916. There are a few interesting sub-tropical plants to be met with at Cuffnells,

near Lyndhurst, the residence of Mr. Reginald Hargreaves, and in the public and private gardens in and around Bournemouth there are some Australian trees well deserving of notice.

TYPES OF AUSTRALIAN VEGETATION.

In Australia, according to Maiden, there are three grand types of vegetation, viz., the brilliant flowering plants of the sandy plains of Western Australia, the luxurious vegetation of eastern Queensland and New South Wales, and the alpine plants of Tasmania. The rain forests of Western Tasmania, with their almost impenetrable masses of beech woods, are very remarkable when compared with the general features of Australian vegetation. Certain families of plants are almost entirely confined to Australia, especially the phyllodineous acacias, and the numerous gum trees. The latter, numbering in all 230 species, are to be met with everywhere. The acacias are still more numerous and reach a total of 412 species. Again, the adaptability of the Australian trees to a dry climate is wonderful ; and in this respect, taking into account the variety of ways in which the destructive effects of a scorching sun and parched soil are guarded against, the Australian flora is without parallel the world over. These adaptations do not indicate, as is supposed, a primitive origin, but are to be accepted as evidence of high specialisation of a singularly interesting character.

GUM TREES IN GENERAL.

Among the most notable of the Australian trees grown out-of-doors in this country, the gum trees (*Eucalyptus*) easily come first. They belong to the myrtle family and thus are allied to the common myrtle of our gardens. They are called gum trees from the fact that they yield a resinous gum from their trunks. A saccharine substance resembling

manna is obtained from one species, and a cool, refreshing drink is yielded by the cider gum of Tasmania. The young branches and leaves of most gum trees are more or less covered with pellucid dots marking the position of oil glands. It is the oil in the leaves that gives the Eucalypts their distinctive odour. The name Eucalyptus is derived from *eu*, well, and *kalypto*, to cover, as with a lid. This is in reference to the flower. Before expansion the stamens are covered with a cap which afterwards falls off in one piece in the shape of a lid or cover. It is worthy of remark that although the largest of trees, reaching to a height of over three hundred feet, the gum trees have very small, even minute, seeds. The flowers are produced in the axils of the leaves either singly or in clusters varying from three to fifteen flowers. The calyx is of a firm texture and separates into two parts, the upper part, as already mentioned, which resembles a lid or cover, falls away in a single piece, while the lower part is persistent and bears very numerous stamens forming a fringe round its summit. The majority of the flowers of Eucalyptus have white and cream-coloured stamens. Those with very showy crimson or yellow stamens are mostly confined to Western and tropical Australia. In one instance the iron bark has sometimes pink and sometimes crimson stamens. In Western Australia there are gum trees with bright yellow stamens, and others with beautiful red stamens, while one has orange-coloured stamens. In the thick and woody walls of the capsules of Eucalyptus we have a remarkable provision for protection against desiccation during the long periods of drought which occur in Australia. As, however, no rain falls when the trees are in flower the pollen is quite unprotected, and the numerous stamens, often a hundred or more, are completely exposed. There is a further remarkable adaptation to environment in the case of the leaves. The leaf-blades in adult trees are not set horizontally like those of the ordinary broad-leaved trees in this country; but by the twisting of their stalks, they are set vertically. This is a provision to lessen evaporation in the dry climate of Australia,

since the narrow edge and not the broad surface of the leaf is directed towards the sun. A further peculiarity noted in Eucalyptus trees is that it usually takes at least twelve months for the flower buds to reach maturity and another year for the fruit to mature. There is little doubt that for the most part the flowers are fertilized by honey-feeding birds. The seeds are retained and remain quite fertile for several years in their woody capsules, which in some cases open their valves only when exposed to forest fires. Seedlings usually spring up in consequence in burnt-over lands. Again, many species when killed by fire rapidly regenerate by suckers from the roots.

The formation of adventitious shoots or suckers is characteristic of all Australian gum trees. It is noticeable what a great contrast exists between the leaves of these suckers and the adult leaves; it is more marked than anything we see in trees in this country. Where large masses of Eucalypts of a shrubby character cover the country, they are usually known as "Mallee." In these there is usually a knotted root-stock from which many stems spring. It is seldom that any specimen in a "gumscrub" attains the dignity of a tree. When it is proposed to clear mallee for agricultural purposes the whole is sometimes crushed down by means of heavy rollers, and when dry it is afterwards burned. When similar shrubby growth is composed of acacia it is called "Mulga."

EUCALYPTUS OIL AND TIMBER.

The bark, resin, and oils of Eucalyptus trees are well-known commercial products. Eucalyptus oil is described as probably the most powerful antiseptic of its class, especially when it is old, as ozone is formed in it on exposure to the air. It does not, however, serve as a substitute for quinine in malaria. Further, in large doses it acts as an irritant, and is a marked nervous depressant. The oil has acquired an extraordinary popular reputation in influenza; but there is

no evidence to show that it has any marked influence upon this disease, or that its use tends to lessen the chance of infection.

The timbers yielded for the most part by species of *Eucalyptus* are the most valuable of the forest resources of Australia. They are remarkable for their durability. Wooden piles have been known to have remained perfectly sound after exposure to sea-water for over forty years. There are also several extremely valuable soft timbers, such as red cedar, silky oak, beech, a variety of teak, and several pines. Jarrah timber from Western Australia, on account of its hardness and durability, has been used for paving London streets.

CULTIVATION OF EUCALYPTS.

Several species of *Eucalyptus* have been cultivated in sub-tropical countries such as North Africa, the Cape, California, Chile, and the northern and southern shores of the Mediterranean, where the conditions have generally proved most favourable for them. In the British Isles, also, numerous attempts have been made to acclimatise *Eucalyptus* trees. At no place have more species been attempted to be grown in the open air than at Abbotsbury. I have a list of forty species that have been tried there. While a good number have been killed in exceptionally severe winters, such as those of 1907 and 1908, there are at least a dozen species that have proved comparatively hardy. These I shall hope to discuss later. A remarkable plantation of *Eucalypts*, perhaps the largest in this country, consisting of about nine hundred trees, was made by the late Mr. Bateman at Brightlingsea Hall in Essex. The trees were in full flower in December, 1906, when visited by Mr. H. J. Elwes, and many were covered with capsules of different ages. A self-sown seedling was noticed about 12ft. high at three years old. At Broadstone Dr. Russel Wallace established about sixty *Eucalyptus* trees (principally *E. Gunnii*) at the Old Orchard at Broadstone. Most of these are still flourishing and producing flowers and

seed. In Cornwall, at Menabilly and Falmouth, there are many Eucalyptus trees of notable size. In the neighbourhood of Bournemouth about half-a-dozen species are met with in the Public Gardens, but only one (*E. Gunnii*), in a private garden, is in any way remarkable for its size. This, according to Mr. Backhouse, is about 30ft. high, with a girth of 48 inches. Owing to the widely different appearance assumed by individual trees at different periods of growth it is extremely difficult to distinguish from leaves alone the species of Eucalyptus under cultivation in this country. In most young plants the leaves are opposite, but they generally become alternate as the plants become older. In adult plants the leaves are quite different. In most species the seed-leaves, the juvenile leaves, and the adult leaves have each their own distinctive character.

According to the researches of Mr. H. J. Elwes, F.R.S., and Professor Augustine Henry, as recorded in their great work, "The Trees of Great Britain and Ireland," the number of species of Eucalyptus under cultivation in this country that have attained large size and regularly bear flowers and fruit is comparatively small, probably not more than a dozen in all. These are chiefly from the highlands of Tasmania, where the climate more nearly approximates that of the South of England.

SOME HARDY EUCALYPTUS.

E. globulus. Blue Gum. Native of Tasmania, Victoria, and New South Wales. This was introduced to Europe in the early part of the nineteenth century, and was first cultivated out-of-doors at Naples. The blue gum is perhaps not absolutely hardy in any part of Britain or Ireland, but it may survive many years and attain large dimensions in favourable localities. In young stages of growth, on account of its ornamental character, it is met with in gardens in almost every part of the country. In exposed positions the trees

grow too fast for their roots, and are usually blown down by strong winds. A remarkably handsome blue gum at Penmere, near Falmouth, measured by Mr. Elwes in 1911, was 95ft. in height by 7ft. 9in. in girth. It was supposed to have been planted between 1864 and 1867. A tree growing at Torquay measured in 1910 53ft. by 5ft. at twenty years old. There are numerous trees of the blue gum in private gardens in Bournemouth, but none of large size. At Hinton Admiral vicarage the Rev. C. O. S. Hatton reports a young tree seven years old which is 30ft. high with a girth of 24in.

At one time the blue gum was regarded as valuable for planting in marshy districts as a preventive of malarial fever. Experiments in this direction were undertaken on the Roman Campagna in the hope that the rapid growth of the blue gum would dry up the marshy lands and destroy by means of the aroma of their leaves all miasmatic emanations. The results proved disappointing, and for the reason recently shown by Ross and Manson, that malaria is produced not by emanations from a marshy soil, but by the presence of an organism in the blood communicated from man to man by mosquitoes. The soundness of this view has been abundantly confirmed by the results obtained in such fever-stricken localities as the Isthmus of Panama and elsewhere. It is admitted that the planting of a fast-growing tree like the blue gum may indirectly have been of benefit by drying up pools in which mosquitoes breed, and by forming a screen which stopped their flight. Beyond this, it is improbable that the blue gum possesses any value not equally shared by other fast-growing trees. Further, the wholesale planting of the blue gum in sub-tropical countries, except in some districts in California, has not been rewarded by the production of serviceable timber.

E. Gunnii. Tasmania Cider Gum. Also found in Victoria and New South Wales. This was named by its discoverer, Sir Joseph Hooker, in honour of Mr. Gunn. In this species the leaves have scarcely any pungent odour, and on that account it is said that the foliage is liable to be browsed by

cattle and sheep. The cider gum is interesting as being the first Australian tree that was cultivated in the open-air in England. Reference has already been made to the plantations comprising nine hundred trees of *E. Gunnii*, established at Brightlingsea and to a smaller collection at Broadstone. An article by Dr. Russel Wallace on this species appeared in the "Garden," lxi. (1902). It may be regarded as quite hardy in the southern and eastern counties, although occasionally some of its branches are cut by severe frosts. Even when its top is injured it usually throws out abundant shoots at ground level. [A photograph of a fine cider gum at Brightlingsea, 50ft. high with a girth of 4ft., and 25 years old was shown.] A well-grown tree of *E. Gunnii* flourishes at Abbotsbury. It measures 70ft. in height with a girth of 5ft. At Marlborough Lodge, Bournemouth, Mr. C. H. Greaves has a tree 30ft. high with a girth of 4ft.

E. Whittingehamensis. This is said to have been raised from seed brought by the late Lord Salisbury from Tasmania. It is closely allied to *E. Gunnii*, and by some authors is included under that species. It is said by Dr. Henry to differ usually from typical *E. Gunnii* in the absence of the glaucous bloom on the branches and leaves of the adult plant. The leaves are lanceolate, longer in proportion to their width than those of *E. Gunnii*, and never ovate as in that species. The fruit is slightly larger than in *E. Gunnii*, urn-shaped, with the rim overhanging the contracted part of the fruit just below it. Dr. Henry ventures the opinion that *E. Whittingehamensis* may prove to be a hybrid with *E. Gunnii* as one of the parents, while the urn-shaped fruit suggests the probability of *E. urnigera* being the other parent, though the tree at Whittingehame does not resemble the latter in foliage. This remarkable gum tree, now more than sixty years old, is growing at Whittingehame, the seat of the Right Hon. Arthur Balfour, M.P., in East Lothian. The locality is three miles and a half from the sea and 384ft. altitude. The subsoil is gravel. In February, 1904, when measured by Mr. H. J. Elwes, the Whittingehame tree was 60ft. to 63ft. high, with a girth of

13ft. 5in. at 2ft. from the ground, where it divides into three stems, which afterwards divide into six main limbs, of which the largest is over 5ft. in girth. It is stated that the seedlings raised from *E. Whittingehamensis* are equally hardy, and withstand frosts that kill other species. At Abbotsbury there is a specimen of this very interesting species now five years old and measuring 30ft. in height. I have also received specimens from trees at Wisley Gardens and Myddelton House, Waltham Cross.

E. acervula. Swamp or Red Gum. Australia and Tasmania. This differs from *E. Gunnii* in its larger size and in the branchlets, leaves and flowers and fruit being never glaucous. Leaves larger than in *E. Gunnii*. This is not a common species. There are three trees at Menabilly in Cornwall. There is one moderately large tree growing on the Horse Shoe Common at Bournemouth, named by Dr. Henry. It does not appear in the list of the Abbotsbury Gardens.

E. Muelleri. Mueller's Red Gum. This is confined to Tasmania, where it usually grows on high, bleak lands. The young branches are reddish with prominent oil glands. Leaves are alternate, thick and firm in texture. Flower-buds sessile, with the calyx tube angled and the operculum tuberculate. This species is said to be rather rare in cultivation. There is a specimen 15ft. high on the Horse Shoe Common at Bournemouth, and there were two trees 40ft. high flourishing at Abbotsbury and bearing flower-buds in 1911. The latter stood in an exposed situation, and are considered very hardy. A well-grown tree at Derreen, co. Kerry, in 1910, measured 63ft. by 4ft. It was then thirty-six years old.

Eucalyptus coccifera. Mountain Peppermint. In the mountains of Tasmania this reaches a height of 20ft. It was discovered in 1840, and in 1851 a plant, eleven years old, was growing in Veitch's Nursery at Exeter. According to Elwes and Henry this "is the hardiest and most successful of all species of *Eucalyptus* in Britain." It is so named from the whitish bloom on the branches and leaves, resembling the waxy secretion of some species of coccus. The leaves are

about $2\frac{1}{2}$ inches long, with a long slender curved point. The fruits are half an inch long. A remarkable tree of this at Powderham Castle, Devonshire, in 1911, was 80ft. high with a girth of 16ft. The spread of the horizontal branches was 90ft. It is probably over seventy years old. At Cuffnells, near Lyndhurst, there are trees 35ft. high from which Mr. Hargreaves sent me some fruits a short time ago. At Abbotsbury there are many specimens which are hardy and thriving.

E. cordata. Tasmanian Heart-leaved Gum. This is confined to Tasmania, where it attains a height of 30ft. The leaves, as the name denotes, are heart-shaped, almost orbicular and glaucous on both sides, with crenate margins. At Abbotsbury this species is thriving—surviving the severest winter and freely producing seed from which seedlings are raised. In the neighbourhood of Bournemouth several trees were in flower from December to February 1915-16. There were also specimens in flower about the same time at Broadstone.

E. pulverulenta. Australian Heart-leaved Gum. Native of southern mountains of New South Wales. This species is not easily distinguished from *E. cordata*. Usually it has thinner and smoother leaves, and their margins are not crenate. The operculum of the flower is conical and long, while that of *E. cordata* is shorter and slightly convex. Further, the fruits are smaller with more protruding valves. It grows well in two localities in Ireland. I lately received a small specimen from Mr. E. A. Bowles from Myddelton House, and a typical leaf from Professor Henry.

E. urnigera. Urn-bearing Gum. Native of Tasmania. This is by no means a handsome tree, often being bare of branches. It is also devoid of glaucous bloom on the branches and leaves. At Abbotsbury this is considered to be one of the hardiest species. Young plants have passed through three severe winters without injury and are now growing freely. There are several trees, the largest of which is 50ft. high by 5ft. in girth. I have received specimens of this species from

Mr. Hargreaves, Cuffnells, near Lyndhurst ; from Mr. E. A. Bowles, of Myddelton House, Middlesex ; and the Royal Horticultural Society's Gardens at Wisley.

E. vernicosa. Dwarf Gum. Native of Tasmania. Usually this is an erect shrub with smooth bark and small leaves $\frac{1}{2}$ in. to 2 in. long, equally green and shining as if varnished on both sides—hence its specific name. In its native country this grows on the summits of the higher mountains. In Scotland it is reported to have never been injured by frost, and forms a beautiful shrub and not developing into a tree. Mr. Kempshall states that it has passed recent winters at Abbotsbury without injury. Specimens of this, by the kindness of Miss Balfour, were received from Whittingehame, East Lothian.

E. pauciflora. Weeping Gum. Native of Australia and Tasmania. This is a handsome, small tree with long pendulous branches and producing an abundance of flowers. It is said to equal *E. coccifera* in hardiness. A tree 16 ft. high was killed at Abbotsbury in 1908.

E. viminalis. Manna or White Gum. Australia and Tasmania. Usually a tree of moderate size, but occasionally much larger. The only large specimens occur in the South of Ireland. Smaller specimens are reported from Devon and Cornwall. Young plants were killed at Abbotsbury in 1905. In Australia it produces mellitose manna which encrusts the stem like a coating of white sugar.

PROPAGATION OF EUCALYPTS.

Before passing to other Australian trees and shrubs it may be useful to add a few words as to the propagation of Eucalypts and the selection of species likely to prove successful on the South Coast. Where well-ripened seed is abundantly produced it might be sown in the open ground in April. This was successfully adopted by Mr. Bateman at Brightlingsea. The seedlings attained a height of about a foot in the first year and 3 ft. to 6 ft. in the second year. On the other hand,

imported seed in small quantity might be more economically raised under glass. Mr. Birkbeck is quoted by Messrs. Elwes and Henry as recommending the following :—Pot the seedlings when 2in. to 3in. high ; re-pot often, as the plants never do well after their roots are pot-bound. Give them bone-meal, keep under glass until 3ft. high, and plant out in good soil in May and June when they are about two years old. Keep them well-staked, as they are easily blown down ; but keep the fastenings loose, as the trees increase quickly in girth. None of the Eucalypts do well with overhanging shade. Mr. Bateman laid great stress on this point, and it was borne out by his success in large plantations of *E. Gunnii*. In very exposed situations shelter from strong south-westerly winds is necessary.

SELECTION OF SPECIES.

As to the selection of species, it may be gathered that as *E. coccifera*, *E. cordata*, *E. vernicosa*, and *E. urnigera* are hardy and ornamental, and do not usually grow into very large trees ; they are well suited for garden cultivation. On the other hand *E. Gunnii*, *E. Whittingehamensis*, *E. acervula*, and *E. Muelleri*, also hardy, are better suited as specimen trees or for belts and plantations. The blue gum (*E. globulus*), although ornamental, when quite young, on account of its comparative tenderness and untidy habit is not recommended where other species are available. *E. ficifolia*, one of the most ornamental of all the eucalypts, with red flowers, has not succeeded, anywhere, out of doors in this country. It flowers and fruits regularly in a conservatory at Abbotsbury.

HARDY ACACIAS.

The acacias or wattles include some fairly large trees, and also form an important portion of the scrub vegetation of Australia. The flowers, are small and collected in large

numbers of yellow globular heads. The leaves in some species are twice or thrice pinnated, and present an elegant feathery appearance. In others, particularly those found in the drier parts of Australia, the true leaves are seldom or never developed. In their absence the leaf-stalk becomes flattened, and assumes a leaf-like appearance. These dilated leaf-stalks, termed phyllodes, fulfil the functions of leaves, and are singularly varied in form in the different species.

Acacia dealbata. Silver Wattle. Australia and Tasmania. The leaves are hoary and pubescent, presenting a silvery appearance. There are ten to twenty pairs of pinnae, each bearing thirty to forty pairs of linear leaflets. The flower panicles are large with globose yellow heads $\frac{1}{4}$ in. in diameter. The pods are straight or flattened 2 in. to 3 in. long. The species is much cultivated on the Riviera for its flowers, which are sent in large quantities to this country in winter under the popular name of "Mimosa." It can be grown in the open-air along the South Coast of England. It has attained a height of 60 ft. after seventeen years' growth from seed at Abbotsbury, where it produces flowers annually in great abundance, and good seed from which plants have been raised. A moderately large tree was in flower (in February) at Broadstone in the garden of the late Dr. Russell Wallace; and a similar tree, also in flower, is flourishing in Alumdale Road, Alum Chine, Bournemouth.

The bark of an allied species—*A. decurrens*—known as the Black or Green Wattle, is very rich in tannin. It is being largely grown in Natal and some parts of India as a tan-bark tree.

A. melanoxylon. Black Wood. Australia and Tasmania. It is seldom that true leaves are produced on this species. Their place is taken by rather leathery phyllodes from $2\frac{1}{4}$ in. to 4 in. long. Very occasionally true pinnate leaves are present on young trees. Flower heads are minute, thirty to forty in a head. Pods linear, flat, 2 in. to 4 in. long. At Abbotsbury a tree planted twelve years ago was about 35 ft. high, and

seedlings have been raised from it. According to Mr. H. J. Elwes, in the South of France this is the best of the acacias for avenues, as it forms a tall tree of regular habit. It is completely naturalised in the Nilgiris. It is not common as an outdoor tree in this country.

Besides the above, Mr. Kempshall reports the Golden Wattle (*Acacia floribunda*), the Broad-leaf Wattle (*A. pycnantha*), the Prickly Wattle (*A. verticillata*), and the Blue-leaved Wattle (*A. cyanophylla*) as also growing at Abbotsbury. In Lady Ilchester's catalogue the names of twenty-six species of *Acacia* are entered as having existed there. *A. Riceana* is a very handsome and distinct species with the graceful habit of a weeping willow.

The wattle has been adopted as the floral emblem of Australia. It is represented on the national coat-of-arms and on postal notes ; it is also used for decorative purposes in a variety of ways. It is announced that when the war is over it is proposed to mark the burial-ground of the gallant Australians that fell in Gallipoli by planting the locality with wattle trees. Doubtless the wattles so planted will consist of species that are likely to be hardy, while at the same time notable for the beauty of their flowers. Something similar is proposed to be done in France to perpetuate the splendid services of the Canadians by planting maple trees. The maple leaf is the national emblem of Canada.

CHANGE OF FLOWERING SEASON.

As already mentioned, the seasons in Australia are reverse to those which obtain in the British Isles. Winter commences in Australia in April and ends in October. When we are expecting seasonable frost and snow at Christmas the Australians are enjoying warm summer weather with a temperature ranging from 60 degrees to 80 degrees Fahr. In the case of Australian trees and shrubs introduced to northern countries it is interesting to watch how they conduct

themselves to meet new conditions. Do they still continue to flower according to the Australian season or is there a change noticeable to enable them to fit in with northern conditions ? In the case of plants grown under glass they may continue the Australian habit ; but plants grown out of doors and fully exposed to the weather appear gradually to adapt themselves to their environment and flower earlier or later. In this connection I may quote from the " Indian Forester " (VIII., 1882) General Morgan's account of the remarkable changes in the period of flowering of *Acacia dealbata*. He says in the Nilgiris the acacias flowered at first in October, which is the month in which the parents flower in Australia. In 1860 they began to flower in September ; in 1870 they flowered in August ; in 1878 in July, and in 1882 in June, which is the spring month in the Nilgiris corresponding with October in Australia.

The observations here recorded by General Morgan do not appear to coincide with the general experience in regard to the flowering of the Silver Wattle in Europe. The change in the flowering occurs later and not earlier than in Australia. For instance, in the Riviera the wattles usually flower from December to February, while out of doors in this more northern climate the flowering takes place still later, viz., from February to April. This change in the flowering of Australian and other plants from the southern hemisphere in order to adapt themselves to the climatic conditions of the northern hemisphere is an interesting subject and deserves fuller investigation.

OTHER AUSTRALIAN TREES AND SHRUBS.

Among other Australian trees and shrubs more or less hardy along the South Coast are several genera of Proteaceae which deserve mention. The more notable of these are *Grevillea*, *Banksia*, *Hakea*, and *Telopea*. None of these are native of any part of the northern hemisphere. In Australia

nearly all the Proteaceae produce an abundance of nectar, and the wood in some instances is valuable for cabinet making.

GREVILLEAS.

Grevillea robusta the "Silky Oak," is probably the most common species grown in greenhouses in this country on account of its very graceful foliage. It is also said to be the most easily grown of any trees of the genus. In sub-tropical countries where the tree is largely planted its bright orange panicles of flowers are very attractive. *Grevillea rosmarinifolia* has flourished out of doors at Abbotsbury. It has linear, rosemary-like leaves with red flowers ; the latter are disposed in terminal clusters, and appear in January and February. Perhaps the finest specimen in this country flowers, annually, in the garden of the late Dr. Russel Wallace at Broadstone. It is a singularly interesting plant. It has found a congenial spot under the shelter of a brick wall facing due south. The highest sprays reach to 7ft., while the spread of the branches from the wall on to the lawn extends to a distance of 17ft. It is abundantly covered with red flowers.

Two other species of *Grevillea* are mentioned in the Abbotsbury Catalogue, viz., *G. longifolia*, with pink flowers, often reaching a height of 12ft. to 15ft., and *G. sulphurea*, with yellow flowers described as "one of the hardiest of all the Grevilleas." It is said to grow freely as a wall plant in the neighbourhood of London.

BANKSIAS.

The Banksias are named in honour of Sir Joseph Banks, the great naturalist, who accompanied Captain Cook on one of his voyages to the South Seas. He was afterwards closely identified with the early history of the Royal Gardens at

Kew. The *Banksias*, known in Australia as "Honeysuckles," are all remarkable for the beauty of their foliage and their characteristic bottle-brush flowers. Two species are reported as growing at Abbotsbury, viz., the oak-leaved *Banksia quercifolia* and *B. integrifolia*. The leaves of the latter are entire and silvery white beneath. Of the hill-loving *B. collina* there are two well-grown bushes now in flower in the late Dr. Russel Wallace's garden at Broadstone. In this species the leaves are broadly linear with a jagged apex. The under surface as in other species is silvery white. The flower heads are about 6 to 8 inches long and about $2\frac{1}{2}$ to 3 inches in diameter. At the time (January, 1916) when the Broadstone plants were in flower, similar plants under cultivation in the Temperate House at Kew also were in bloom. An illustration of the latter appeared in the "Garden." *Banksia collina* was introduced in 1822, and the first plant to flower in this country was in the conservatory of the Duke of Northumberland at Sion House, near Isleworth. In 1830 it flowered in one of the houses at the Edinburgh Botanic Garden.

HAKEAS.

The Hakeas, named after the botanist Hake, are known in Australia as "Needle Bush" and "Pin Bush" on account of their extremely sharp-pointed leaves. According to Maiden, good drinking water is obtainable from the fleshy roots of *Hakea leucoptera*. As this grows in arid sandy districts the water no doubt proved of great value to the early explorers of the Australian continent. The flowers of *Hakea lorea* are rich in a brown thick honey. *Hakea pubescens* is now growing at Abbotsbury. The most remarkable Hakea tree in this country is certainly that growing on the lawn at Cuffnells, near Lyndhurst. This is the dagger-leaved *Hakea acicularis*. Mr. Reginald Hargreaves informs me that originally the tree grew in a conservatory

attached to the house. When by accident this was burnt down, the tree, which was not seriously injured, was planted out, at the beginning of the last century, on the open lawn, where it has remained ever since. Notwithstanding its great age it regularly produces its pale white flowers and snail-like fruits. Specimens of these are now before us. This interesting tree is about 20ft. high with a girth of stem of about 4ft. 6in. A small plant of the same species is met with at Broadstone. *Hakea eucalyptoides* was formerly grown at Abbotsbury. This when in flower is a very striking plant on account of its abundant scarlet balls of flowers, which emit long styles that deck the branchlets. It does exceedingly well in the Mediterranean region, where it is called "Sea Urchin" by English visitors. It is referred to as "the glory of the gardens of the Riviera." At the well-known La Mortola gardens, established by the late Sir Thomas Hanbury, this species flourishes as a shrub 10ft. high with balls of flowers $2\frac{1}{2}$ in. in diameter. Another notable member of the Proteacea is the Waratah (*Telopea speciosissima*), with very red showy flowers. It sometimes appears in gardens as Embothrium. There are plants of this which occasionally flower at Abbotsbury and Broadstone. The Waratah is also known as the native tulip tree, and like, the kangaroo and acacia, is symbolic of the country. The aborigines were accustomed to suck its large tubular flowers for the honey they contained. The common bottle-brush tree *Callistemon speciosus* is hardy at Abbotsbury, and very attractive with its fine masses of red flowers.

LESSER KNOWN TREES AND SHRUBS.

As there are more than sixty Australian plants that are more or less hardy along the South Coast, it is impossible to describe them in detail. It will be sufficient if I pass them briefly in review. The musk tree (*Olearia argyrophylla*)

flourishes at Abbotsbury. It is said to yield a brilliant sap green, and the timber has a pleasant fragrance and a beautiful mottled colour. The Wonga-wonga vine (*Tecoma australis*), with yellowish white flowers tinged with purple-red, is a half-hardy climber. The Flame tree (*Brachychiton acerifolium*), so called on account of its bright red flowers, is a most conspicuous feature of an Illawarra landscape, and Captain Cook's tea plant (*Leptospermum scoparium*), with reddish lilac flowers, which attains at Abbotsbury a height of 8ft., and is 4ft. 6in. through, are all notable plants. There are three species of Australian Pittosporums commonly seen in southern gardens, viz., the native laurel (*P. undulatum*), the diamond-leaved laurel (*P. rhombifolium*), and the Cheese-wood (*P. bicolor*). An attractive climber allied to the Pittosporums (*Sollya heterophylla*) has rich blue flowers. This is said to be hardy also in some parts of Scotland, but is not cultivated so widely as it deserves. Amongst the most beautiful of the West Australian myrtles is *Calothamnus quadrifidus* an evergreen shrub with needle-shaped leaves and scarlet flowers. *Chorizma angustifolium* bears beautiful orange-red pea-like flowers, and two species of Hardenbergia also possess handsome flowers of a very similar character. The Glory pea of New South Wales (*Clianthus Dampieri*), with its glaucous hoary leaves and richly coloured flowers, is far superior to the New Zealand *Clianthus puniceus*. In Dr. Wallace's old garden there are several species of Correa, which are decorative shrubs with white and bright scarlet flowers. *C. alba* is native of South Australia and *C. virens* of New South Wales. Of the Melaleucas, Abbotsbury can claim success with four species, viz., the Hypericum-leaved (*M. hypericifolia*) with splendid scarlet flowers; *M. Wilsonnii*, with red flowers; *M. decussata*, with rather small lilac flowers, and the rather uncommon *M. preissiana*. Of the Australian veronicas *Veronica formosa*, a beautiful plant with pale blue flowers, and the Digger's Speedwell (*V. perfoliata*), with bluish-violet flowers, are occasionally grown in southern gardens.

CONCLUSION.

In closing I may add that from a scientific point there is a further reason why we should carefully study the Australian flora as represented in this country. It has been claimed by von Ettingshausen that he has found the leaf remains of such familiar Australian plants as *Eucalyptus* and *Metrosideros* in fossil beds contemporaneous with those of the Bournemouth cliffs. Also, Heer has described such Australian genera as *Banksia*, *Eucalyptus*, *Grevillea*, and *Hakea* from leaf remains in the Miocene formations of Switzerland. Although neither of these discoveries has been accepted by such leading authorities as Bentham and Hooker, it is possible that a careful comparison of the fossil remains and the living Australian plants accessible to us might help to solve the difficulty. Palæo-botanists are agreed that the identification of fossil leaf impressions with an existing flora is a most difficult task. Even in the case of fresh specimens it is not a matter of surprise that experienced botanists in Australia hesitate to determine species of *Eucalyptus* from leaves alone. Flowers and fruit are always desirable.

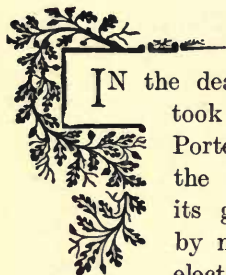




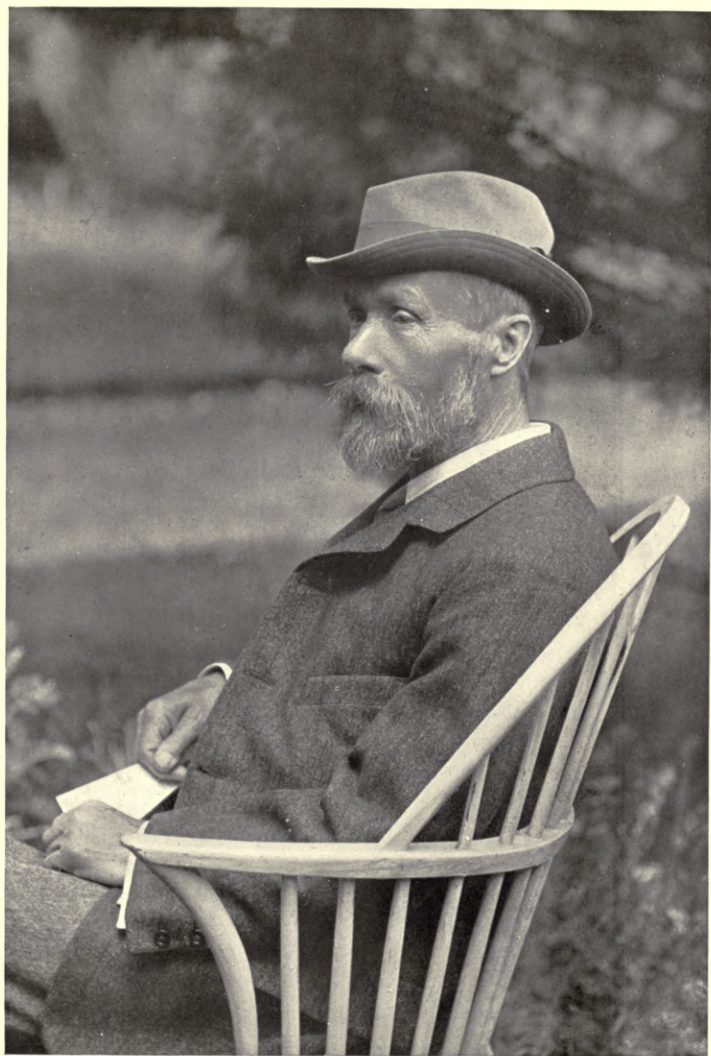
In Memoriam.

THE LATE HENRY COLLEY MARCH, M.D., F.S.A., J.P.

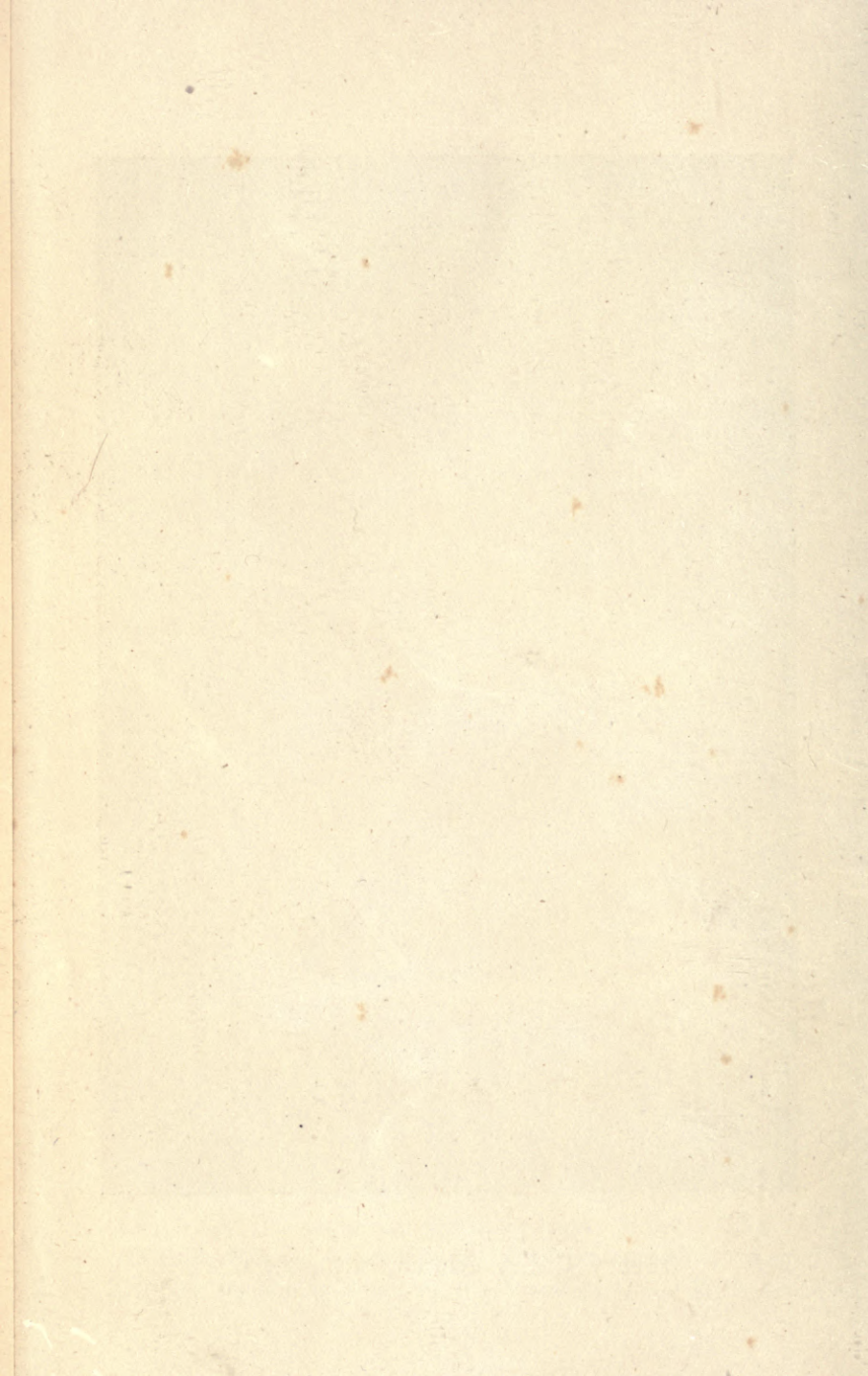
By NELSON MOORE RICHARDSON, B.A.



IN the death of Dr. Henry Colley March, which took place at his residence, Nethergrove, Portesham, on Tuesday, February 15th, 1916, the Dorset Field Club has sustained one of its greatest losses in recent years. Though by no means one of the oldest members, his election having taken place on February 11th, 1896, he has always been in the front rank of its antiquaries, while taking also an interest in general Natural History and more especially in Geology, in which he has among other things brought together some valuable evidence as to the existence of an ice sheet in Dorset as well as in more northern latitudes. (See Proc. D.F.C., XIX., 130.) A paper on Lynchets (Proc. D.F.C., XXIV., 67) dealt with the different modes of origin ascribed to them and the results of some of his investigations. With the



Henry Colley March, M.D., F.S.A.



exception of his last paper—viz., an introductory sketch on the excavation of the Dewlish Elephant Trench, written as Chairman of the Earthworks Committee of the Club (Proc. XXXVI., 209)—all the papers by him contained in its Proceedings are antiquarian and relate to the following subjects : —“The Pagan-Christian Overlap of the Wise Bird, with Dorset Illustrations” (XVIII., 116); “Various Roman Pavements, their Ornamentation and Symbols” (XXI., 162; XXI., 205; XXV., 17; XXVII., 239); “The Hill Fortress called Eggardun” (XXII., 28); “The Giant and the Maypole of Cerne” (XXII., 101); “The Gāndhāra Sculptures” (XXIV., 93); a paper read in connection with the visit of the Club on August 20th, 1908, to the stone circles and other prehistoric remains in the Portesham neighbourhood under his guidance, entitled “The Ritual of Barrows and Circles” (XXIX., 225); and “Scando-Gothic Art in Wessex” (XXXIV., 1). These papers do not, however, by any means represent all his work for the Club. The short notes, recorded and unrecorded, the antiquarian and other exhibits, often accompanied by learned remarks and explanations, the occasions on which he acted as guide at the excursions of the Club and the information afforded in little discourses on the various objects of interest visited, are too numerous to mention. Under his superintendence as Chairman of the Earthworks Committee was successfully carried through the excavation of Maumbury Rings, which proved it to have been constructed for the purpose of a Roman Amphitheatre, the details being laid open to the view gradually in the course of the work, which was carried on during several years; a full report by Mr. St. George Gray appeared in the Proceedings of the Club. In May, 1902, Dr. March was appointed Hon. Secretary of the Club, which office he held for two years with great advantage to the Club, as from his special knowledge and energy he did his best to encourage real work amongst the members, with more or less success. In 1904 he retired from the Secretaryship, being succeeded by Rev. H. Pentin the present Hon. Secretary,

his term of office therefore corresponding with that of Lord Eustace Cecil as President. Besides the excavations undertaken by the Earthworks Committee of the Club under Dr. March's Chairmanship, a general prehistoric survey of Dorset was commenced under his auspices, and has up to the present been carried out to a small extent in a few parishes, including especially that of Portesham; in which the writer had the pleasure and interest of assisting him. This was performed with the thoroughness characteristic of his other works. All prehistoric remains that could be found in the parish were catalogued, measured, and noted down on the 6in. Ordnance Map, and even so lately as last summer a few lynchets which had been omitted at first were visited in spite of his growing weakness, so as to complete the map. Dr. March had a strong sense of humour by which he often added little touches to relieve the somewhat dry character almost inseparable from parts of a learned address, and sometimes much amused his hearers by original remarks on his own and other exhibits. He was always ready to discuss questions on which others differed from him and to give consideration to their arguments, though in many things he was most tenacious of his own views. He was very fond of music; and though the writer never heard him play on any instrument, he manipulated his mechanical organ-player with skill, and, by some little contrivances of his own, so modified his gramophone that it produced less of the objectionable twang of that instrument than usual and a much more agreeable sound. He was devoted to his garden, in which he grew a great variety of plants and shrubs, especially many which he had brought back with him from abroad, and which are not often seen in this country, and no one would have believed that so mature-looking a garden could have been formed in the course of 20 years.

Dr. March was born at Colchester in 1838, his father, the Rev. Henry March, having been a Congregational Minister. In 1860 he became a member of the Royal College of Surgeons and a Licentiate of the Society of Apothecaries, securing

honours in anatomy and physiology. He became M.B. in 1862 and M.D. (London) in 1867. He went to Rochdale in 1863, where he practised his profession for 33 years, retiring to Portesham in 1896. He married a lady who shared his interests and tastes, the daughter of Alderman James Booth, who, with his son and daughter, survives him. He was a Fellow of the Society of Antiquaries (of which he was local secretary for Dorset), and a member of the Archæological Institute and other Scientific and Antiquarian Societies. He was an original member of the Lancashire and Cheshire Antiquarian Society, and one of the founders of the Rochdale Literary and Scientific Society. When living at Rochdale he formed a fine collection of flint implements from the Neolithic floor, and would often rise before dawn and drive miles over the moor to reach some favourite "floor" and return to make his usual rounds, and this in spite of the fact that he was never strong, but his vitality and energy seemed inexhaustible.

To the writer of this notice, the loss is that of an intimate friend, whom he always felt that he could consult with advantage in any case of difficulty that might arise in connection with the Field Club or more private matters, and whose opinion and advice, always honestly and fairly given, he greatly valued, in spite of the difference of their views on certain points. For his kindness and liberality in his neighbourhood he will be missed by all around him. One of his old friends writes of him—"Not only by his own immediate circle, but by friends and scientific colleagues throughout the country, his loss will be deeply mourned, as one whose genuine kindness and readiness to help all who sought his aid had endeared him to them, while his scientific attainments, love of truth, and careful observation and induction were characteristics that made him a model for all engaged in research."

The memorial notices in the Rochdale papers, from which extracts are given below, shew the high estimation in which he was held during his long residence in that town.

For a number of years before he departed from Rochdale Dr. March was a Justice of the Peace for the Borough, and he brought to his work in that capacity all the zeal and zest which he displayed in other departments, public and private. For a number of years he was also police surgeon for the borough.

Dr. March was not a native of Rochdale, but during the thirty years or more that he resided amongst us he identified himself with a variety of movements for the social and intellectual advancement of the town. He was an inspiring intellectual force among us, and made for himself a name, especially in medical and archæological circles, honoured far beyond Rochdale's boundaries.

Dr. March quickly won his way to a leading place among local practitioners, and long before he retired in 1896 he had one of the largest and most lucrative practices in the town and district. His patients had the greatest faith in his professional skill and knowledge. He took infinite pains to keep abreast of the modern developments of medical science, and he had that valuable type of scientific mind which was never afraid of new discoveries, and was, indeed, ever on the look-out for them. He wrote considerably on professional subjects.

Locally he was among the earliest of scientific men to seriously take up the investigation of the archæology and geology of the Rochdale hills; and the extremely fine collection of flint implements, which he gathered from the Rochdale Neolithic floor and presented to the town in 1896, is practical evidence of his valuable work in this branch of science.

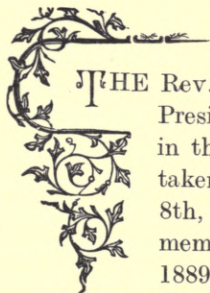
It is not too much to say that no member of the Literary and Scientific Society made more valuable contributions to the society's literature.





In Memoriam
The late Rev. William Miles Barnes, B.A.

By NELSON MOORE RICHARDSON, B.A.



THE Rev. William Miles Barnes is the second Vice President whom the Dorset Field Club has lost in the course of five months, his death having taken place at his house at Dorchester on July 8th, 1916. Mr. Barnes was one of the older members of the Club, having been elected in 1889, and was for many years, until partial blindness came upon him, untiring in his efforts to further its interests and to work out and record various matters connected with Dorset. The only official position held by him in the Club was that of Editor of its Proceedings from 1901 to 1906, in which period the volumes bear testimony to the care bestowed upon them, especially the accounts of the Meetings,

which he developed and amplified. He was made a Vice-President in 1904. Perhaps the most lasting and generally interesting work carried out by him is contained in the fine series of volumes of the Photographic Survey of Dorset, which survey has since been carried on by others, but was founded by him, the bulk of the beautiful photographs being his personal work. They are most valuable as records of much that has passed and is passing away. But photography was only one of many branches in which Mr. Barnes worked for the Club. His first paper appears in Vol. XII. of the Proceedings, and is entitled "A brief Historical and descriptive sketch of the Churches in the Rural Deanery of Dorchester," and a second one on the Roman Defences of Dorchester is in the same volume. Thenceforward one or more papers from his pen will be found in almost every volume for many years. Architecture was one of his strong subjects, and at Field Meetings he was often appealed to for information about the churches visited. A paper on the form and probable history of Saxon Church Architecture is contained in Vol. XXIII. The Pipe Rolls and Patent and Close Rolls (Dorset), especially of King John's reign, form the subject of papers in Vols. XIV., XV., XVI., and XIX.

Mr. Barnes did much work in connection with the Church Bells of Dorset, some of the results being embodied in a paper at p. 97 of Vol. XXVII. His last paper is in Vol XXVIII., the subject being "The Liberty and Manor of Frampton. Rolls of the Court Leet and Court Baron." His energies were not, however, confined to his work for the Dorset Field Club, and this notice would be incomplete without a reference to his musical talents and his connection with the Dorset Orchestral Association, of which he was the founder and Hon. Secretary. Under his organization also as Hon. Secretary of the Salisbury Diocesan Choral Association many choral festivals were held in Salisbury Cathedral. The son of William Barnes, the Dorset poet, he was born in 1840 and educated at his father's school in Dorchester, and St. John's College, Cambridge, where he took his degree in 1863. For

42 years he was Rector of Winterbourne Monkton near Dorchester, and resigned the living owing to failing eyesight in 1908.

Mr. Barnes was unsparing in the trouble and time he devoted to anything he undertook, and had considerable powers of organization, which, together with his interest in and knowledge of many subjects dealt with by the Club, made his loss a very serious one, when about 8 years ago he became unable to contribute to its Proceedings and to help it in other ways. His partial blindness must have been a great trial to one accustomed to make such good use of his sight, but was cheerfully borne. The writer is indebted to him for many acts of kind help and support in connection with the Club and otherwise during a friendship of many years standing. He leaves a family of two sons and two daughters.



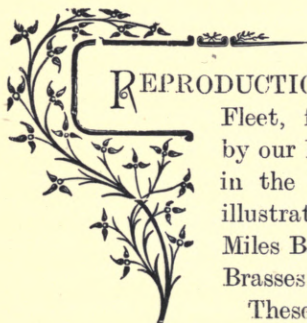


Ancient Memorial Brasses of Dorset.

By W. de C. PRIDEAUX, F.S.A.

PART 10.

FLEET OLD CHURCH, HOLY TRINITY.



REPRODUCTIONS of the Memorial Brasses at Fleet, from excellent direct photographs by our President, appear opposite page 55, in the Field Club *Proceedings* for 1898, illustrating an article by the Rev. W. Miles Barnes on Fleet Old Church and its Brasses.

These photographs show the greater part of the brasses clearly, representing them much as they appear to-day, plainly showing the tarnish of Time's fingers spreading from their edges, and, to the contemplative eye, are superior to the mechanical, but necessary, black and white reproduction.

Although these memorials are in a church ruined in the "Outrage" of 1824 and unused, except for occasional burial



BRASS OF MARGARET MOHUN.

services, fortunately we do not need to say that it is a place of "fractured arch and mouldering wall."

The Brasses have been partially reproduced, being given to illustrate an article on Mohuns Ottery, Devon, in "Memorials of the West," published in 1888, by W. Hamilton Rogers, F.S.A., whose recent death has removed a charming personality from the ranks of West Country antiquaries.

For the sake of sequence, however, I bring them again to your notice, and show the usual plain black and white facsimiles of these square but interesting 17th Century plates, in their stone frames.

Position.—Within stone frames fixed against the Chancel wall on either side of east window ; the earlier brass being on the North side. A marble slab within a similar stone frame deserves notice ; it is on the South wall of the Chancel, and I reproduce it for comparison.

Size.—1. Margaret Mohun, 1603, 27in. high by 20in. wide.

2. Maximilian Mohun, 1612, 20ins. high by 28in. wide.

3. Francis Mohun, 1711 (Marble Slab), 24in. high by 19½ins. wide.

INSCRIPTIONS.

"Hic jacet Margarita uxor quendam castissima viri dignissimi Roberti Mohun alias Moun de Bothenhampton in comitatu Dorcestensi armigeri, quae quidem Margarita fuit filia et cohaeres Stephani Hyde de Hyde in eodem etiam comitatu armigeri. Hae 17 liberorum faelicissima fuit parens. Vixit annos circiter 90, ac in Domino requiescit. Obiit primo die Decembris anno regni serenissimi Jacobi Anglorum regis 1 ac Scotiae 36, salutis 1603."

"Here lies Margaret once the virtuous wife of the most honourable Robert Mohun, otherwise Moun of Bothenhampton in the county of Dorset, esquire, which Margaret was the daughter and coheiress of Stephen Hyde in the same county,

esquire, and was the most happy mother of seventeen children. She lived about 90 years and rests in the Lord. She died on the first day of December in the first year of the reign of the most serene, James, King of England and his 36th year as King of Scotland ; in the year of our salvation, 1603."

"Hic jacet Maximilianus Mohun armiger, filius Roberti Mohum alias Moun de Bothehampton in comitat Dorcestrensi armigeri, qui quidem Maximilianus una cum uxore castissima Anna filia et cohaere de Johannis Churchill de Corton generosi tredecem liberorum faelicissimus fuit parens. Vixit annos circiter 48^{to} ac vita bene beateque peracta, in Domino requiescit. Obiit xiii^o die Octobris anno regni serenissimi Jacobi Anglorum regis x^o ac Scotiae XLV^o anno Salutis 1612."

"Here lies Maximilian Mohun esquire, son of Robert Mohun, otherwise Moun of Bothenhampton in the county of Dorset, which Maximilian, together with his virtuous wife Anne, the daughter and coheiress of John Churchill gentleman of Corton, was the happy parent of thirteen children. He lived about 48 years, and after a well spent and happy life he rests in the Lord. He died the 14th day of October in the tenth year of the reign of the most serene James, King of England and his forty fifth year as King of Scotland ; in the year of our Salvation, 1612."

"Vir dignissimus, Franciscus Mohun Armiger, filius Maximiliani qui fuit filius Maximiliani Mohun, obiit 25^{to} Feb. ii., 1711-12 mo., anno aetatis suae 84^{to}.

Prisca fides, cultusque Dei, patriaeque ruentis,
Fidus amor primaerum excoluere virum."

"The most honourable Francis Mohun Esquire, son of Maximilian who was the son of Maximilian Mohun died 25th February, 1711-12 in the 84th year of his age.

The good faith of a day gone by, the worship of his God and loyalty to his country in jeopardy, made up a character of pristine excellence."

Description.—These brasses are of familiar quadrangular type, met with in the early part of the 17th Century, and



BRASS OF MAXIMILIAN MOHUN.

show the usual family grouping ; the father in armour, with nine sons kneeling on one side of the table, the mother with eight daughters on the opposite side, and having their armorial bearings above.

These late brasses may in this county be compared with Nicholas Martin and his wife of a decade earlier at Piddleton, and Mistress Clavell and her children, the first wife of John Clavell, at Church Knowle, having their effigies partly cut around ; but they are otherwise very similar.

Arising from this description, I wish to draw your attention to the peculiarities brought to my notice while visiting Fleet last year with our member Mr. J. G. W. Clift, who would have been present to speak himself were it not that sterner duties call, his address now being R.E. Mess, Brompton Barracks, Chatham. Mr. Clift, as you may be aware, is a member of the Royal Commission for the Preservation of Historical Monuments, and rightly considers he is translating theory into practice by offering his services to his country.

To illustrate the peculiarities, I have taken impressions both in wax and foil ; I find the latter particularly useful. Mr. Clift drew my attention to the fact that these brasses appeared to have been executed in rather a different fashion to that usually adopted. He says in a letter of last week :—

“The most common form of work was undoubtedly executed with graving tools, and in the hands of a skilful man no finer method could have been employed for the production of clean good work and line. Somewhere about the early part of the 16th century, however, the style of brass changes somewhat, and shadows are worked with cross-hatching in a very straggling fashion ; and if I am correct, a new method of producing the incised lines was introduced, namely, acid biting. I have from time to time noticed brasses of this period in which the lines show the characteristic ragged edge of the bitten line.”

From my experience of Dorset brasses, these examples do appear to differ from others in the county, and since Mr. Clift pointed out this difference, I have examined many and

failed to find another similar. I would ask you to compare the free and exact sweep of the letters and figures of the Martin brass at Piddleton with the halting outline of these Fleet examples, particularly the letter curves with their very ragged edges.

The ground appears to differ from the engraved type, the depressions are shelving, not upright, nor in the least undercut; if the graver was exclusively used for these brasses the letters and numerals are most carelessly cut, and yet the effigies, table, &c., are finely done, having fine cross-hatching, thus militating against the idea that the roughness is that of a careless craftsman; but is possibly due to the process employed. Why should the floor of cavities be very fairly smooth, if the graver is allowed such licence in outlining? Further *data* and examples must be obtained before one can speak with certainty, but I think Mr. Clift's observations are deserving of the most careful consideration, especially as etching is known to have been discovered in the early part of the 16th century. Francesco Mazzuoli, who lived from 1503 to 1540 (*Vasari*, Vol. III., pp. 508 and 356), is credited with first using acid-bitten plates.

Heraldry.

1. On a shield of arms, above effigies. *Gules, a maunch ermine, the hand proper holding a fleur de lis within a bordure or, a crescent for difference* Mohun; impaling, *a chevron between three lozenges, on a chief an eagle displayed.* Hide. Over the shield appears, "Insignia Mohun et Hide."
2. On a shield of arms above effigies. Quarterly 1st and 4th, Mohun; 2nd, Hide; 3rd. *a lion rampant debruised with a bendlet, a crescent for difference,* Churchill.
3. On a shield of arms over the marble slab. Mohun, impaling *Argent, on a chevron gules three martlets, and a rose on a canton.* Sheldon.

I now wish to state a few facts about the Mohun family of Fleet, and particularly about those members commemorated by the tablets.*

A pedigree compiled in 1606 by William Dethick, Garter King of Arms, but not registered at Heralds College, appears to be the authority for deducing its origin from Sir Robert Mohun of Porlock, the second son of Sir John Mohun of Dunster Castle, who died in 1330.

This Sir Robert is stated to have been the great-great-grandfather of Sir John Mohun, of Mohun Ottery in Devon, father of Richard Mohun, father of Robert Mohun with whom the official pedigree begins.

I. Robert Mohun (or Moone) of Baunton or Bothenhampton died on the 14th November 1580, seized of the manors of Loder Matravers (formerly the property of Ford Abbey), Mangerton and Fleet, the rectory of East Chaldon and other property in the neighbourhood (*Inq. P.M.*). He appears with his wife (born Margaret Hyde, of Hyde) and his children on the earlier brass.† Although there were no less than 17 children, the names of only seven are known to me—

1. Robert, heir to his father.

2. Maxmilian, heir to his brother.

3. John, matriculated at St. Alban Hall, Oxford, in 1586, and was admitted a student of the Middle Temple in 1591. His daughter Anne died in 1600.

4. Mary, 5, Joan, 6, Margaret, and 7, Alice. The last named daughter married William Symonds of Exeter and left issue. (*Devon Visitation*, 1620).

II. Robert Mohun, son and heir of Robert and Margaret, matriculated at St. Alban Hall in 1577, being then nineteen

* See *A History of Dunster*, by Sir H. C. Maxwell Lyte, K.C.B., who traces the numerous branches, and, in appendix B, gives examples of 13th and 14th Century Mohun Seals, bearing the Maunch. Also Hutchins's *Dorset* Vol. ii.

† Robert himself was buried in the south aisle of Bridport church, near his parents, as directed in his will (P.C.C., 38 Darcy).

years of age. He married Meliora, daughter of Pitt of Blandford, and by her had issue three daughters.

Meliora, born in 1587, married to John Daccomb.*

Margaret, born in 1588, married to John Hele.

Anne, born in 1594, married to — Hele.

Robert Mohun, the second, died in 1598, when the entailed estates passed to his brother. (*Inq. P.M.*)

III. Maximilian Mohun matriculated at St. Alban Hall in 1581, being then 16 years of age. He afterwards became a student of the Middle Temple. He married on the 4th October, 1593, Anne, daughter and coheiress of John Churchill of Corton.

They and their 13 children appear on the later brass at Fleet.

The names of twelve are known :—

1. Maximilian, heir to his father.

2. Churchill, matriculated at Oxford in April, 1613, with his elder brother. He died *S.P.*

3. Robert, of West Buckham, near Beaminster, a Major in the Royalist Army. He was taken prisoner near Bridgewater, and afterwards compounded for his estate. In 1634 he married Elizabeth, daughter of John Hillary of Meerhay.

4. John, born in 1605. 5. George, born in 1607.

6. Mary, born in 1595 ; married in 1610 to Cornelius Weston of Colyton.

7. Elizabeth, married to John Collop. 8. Anne.

9. Margaret, born in 1606. 10. Eleanor.

11. Thomasine, born in 1610. 12. Catherine, born in 1612,

IV. Maximilian Mohun, the second, was born in November, 1596, and matriculated at Oxford in 1613. In 1631 he paid £10 for exemption from the duty of taking knighthood. Having supported the King in the Civil War, his estate was sequestrated for about 7 years, during part of which he was

* It is possible that Daccomb married Meliora the elder, widow of Robert Mohun. (*P.R.O. Chan. Proc. Ser. ii. 333/6*).

in prison at Weymouth. He was eventually allowed to compound for £1,540 18s. 4d. He died in 1673. By Elizabeth his wife, daughter of Francis Chaldecot of Whiteway, he had issue 10 children, the names of six being known :—

1. Maximilian, baptized at his mother's old home at Steple, in March, 1662 ; was living in 1651, but predeceased his father.

2. Francis, heir to his father.

3. Robert, a captain in the navy. He died in 1667.

4. William, who obtained a small property at Portishead and married Mary, daughter of Richard Morgan of that place. He died the 23rd March, 1691. His wife survived until the 25th July, 1692. Their only son Maximilian seems to have died young, as their property passed to Elizabeth their daughter, who married Sir Edward Fust, Bart.

5. Edith, who died in 1672.

6. Elizabeth, who married Robert Yardley.

V. Francis Mohun was born in 1628. The marble tablet above mentioned is to his memory. He was one of the principal men in Dorset who refused to support the repeal of the penal laws in 1688. Eleanor his wife, daughter of Ralph Sheldon of Stanton in Derbyshire, a niece of Gilbert Sheldon, Archbishop of Canterbury, survived until 1772. She bore him three children :—

1. Gilbert Maximilian, heir to his father, born 1675.

2. Catherine, born in 1688, married Sir Edward Fust, Bart.

3. Elizabeth, born in 1671, married in 1698 to Robert Brodrepp of Maperton. She died in 1708.

VI. Gilbert Maximilian, born in 1675, was married twice. Will proved 1739.

1. Gilbert Maximilian, the second, is stated to have been born in 1706.

2. Francis Mohun was born in 1713 ; he was third lieutenant on the *Victory* in October, 1744, when the ship was lost, and his estate passed to Robert, the youngest of the brothers. ⁽¹⁾

3. Robert Mohun, the last male member of this branch of the family, was born in 1715. He died unmarried in 1758, and the remains of the property were divided between his two sisters. His father's eldest daughter, Elizabeth Lyte (of Lytescary, Somerset), being only his half-sister, was not accounted one of the coheirs. The manor of Fleet passed to his sister Sarah, the wife of Thomas Farwell, and afterwards of John Gould of Upwey.

Brasses of another branch of the Mohun family may be seen at Lanteglos, by Fowey—a knight in armour of the middle of the 15th century, another in armour with his wife, who both died in 1508 of the sweating sickness. Joan, Lady de Mohun, *temp.* Richard II., rests below a stately marble effigy in the crypt of Canterbury Cathedral. She died October 4th, 1464. (*Inq. P.M.* 6 Hen. IV.)

Among the Fry collection of documents in the Dorset County Museum are several deeds relating to the Mohuns; they are catalogued under Fleet and Wyke Regis.

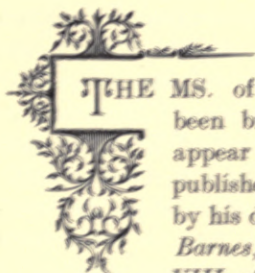




Edge Tools in Early Britan.

BY THE REV. WILLIAM BARNES, B.D., RECTOR OF CAME,
BORN A.D. 1801, DIED A.D. 1886.

(Edited by CAPTAIN J. E. ACLAND, F.S.A.).



THE MS. of this interesting monograph has only been brought to light recently. It does not appear in the list of the author's works, either published or "hand-writ" (not printed), given by his daughter, Lucy Baxter, in "*The Life of Barnes*," 1887, nor is it in the list in Vol. VIII. of the Proceedings Dorset F.C.

It consists of 32 odd sheets of paper, 6½ inches by 4 inches, held together by metal clips. The outside page, which bears his signature, was apparently a bookpost wrapper, or circular, as it has a half-penny stamp, the Dorchester post mark, and the address "Rev. W. Barnes, The Rectory, Came, Dorchester." The date is Ap. 13, '82. Another sheet is part of a printed circular, bearing the same date, 1882. We may therefore conclude that the paper was written in that year, but for what purpose is not known. Canon Mansel-Pleydell (by

whom it is given to the Dorset County Museum) says it belonged to his father, J. C. Mansel-Pleydell, who was very intimate with Mr. Barnes and in constant communication with him on archæological subjects. The handwriting is large and irregular, with rarely more than two or three words in a line ; and, as will be readily noticed, the treatment of the subject and the phraseology are characteristic of our Dorset poet and philologist.

TRANSCRIPT OF THE MANUSCRIPT.

“ There are words in English and Welsh that sound of things of the Stone Age of our race. We have a steel edge tool called a *chisel*, and we have by Portland a bank of pebbles called the Chesil or chisel Beach, and chisel in Anglo-Saxon, *ceosel*, now *chesil* or *chisel*, means a hard stone, such as a flint or pebble, and we may believe that the edge tool was first called a *ceosel* when it was a *chisel* as a *flint*.

“ Then we have *flint*, and in Anglo-Saxon *flean* is an arrow, and *fleanet* would mean a little arrow, or the arrow head ; and *fleanet* would become shortened into *fleant*, or *flint*, and the *flint* is often called by the Dorset folk “ a *vlint-stwone* ” (a *flint stone*), since the word *flint* did not at first mean a stone at all. So the Latin *celtis* is a *chisel* or *knife*, and *culter* a *knife*, as for the ending *-er* strengthens the meaning of a word. But in Welsh *celt* is a *flint*, so called from *caled*, *hard* ; and the *Fleam*, the barbed lancet with which cattle are bled (in its early Saxon or Friesic shape *fleame*), meant a flying thing or an arrow head, to which in shape it is not unlike.

“ Our word *Hammer* seems to have meant in its first use and form a clump of hard stone. In the “ *Mittel hoch deutsches Worterbuch* ” by Adolf Ziemann (the middle high Dutch Word book) we have *Hamer Harter Stein*, *Hammer*, a very hard stone. In old Friesic it is *Homer*.

“ In the time of *Homer*, which might have been a thousand years ere the Nativity, for his lifetime was an unmarked

length of a dark time in Greek history, Bronze smithery had been so far a wonted craft of the Greeks that a smith in metal was called by them a Χαλκοῦργος, a bronze or brass smith, Σιδηροῦργος long afterwards an iron-smith.

“ At what time Bronze tools came into the hands of Britons in this land, it is not easy to tell, nor are we sure by what line or form of traffic they were brought hither ; whether from Phenicians of Cadiz, or Phenicia, or through Gaul, or straight over the sea. Some bronze might have come through Gaul, and it may be more of it might have been brought over the sea by the Phenicians. There is a tradition in British lore that there came into Britain in early times a people whom the Britons call “ Hir ei Peisieu,” long coats, or “ Long-coated men,” but it does not say that they came in war, or where in Britain they abode, or whence or why they came. Strabo, the Greek geographer 44 years B.C., writes of the Cassiterides (Scilly Islands), whither it is said the Phenicians came for tin—“ The Kattiterides are indeed ten, and they be near each other towards the north from the haven of the Cornish Artabii. One of them is uninhabited, but on the others there are men with black coats down to their feet, belted round the waist, walking about with sticks or wands, and with beards like goats. They live mostly on cattle. They have as metals tin and lead, and they get for these and for their hides, crockery, and salt, and Bronze ware for the Chapmen.

“ This is interesting, as it shews that these “ Long coats ” were middle men between the Phenicians and the Chapmen of Britain who retailed the Phenician wares to the Britons. Now who should these men be but the long-coats of the Welsh tradition ? The tradition is that they were in-comers, and the garb of these men shows they were not Britons. They were most likely Phenicians, or successors of Phenicians who were put there at the head-quarters of their staple trade with the Britons, and who also catered for the Phenician crews, buying into their stores of tin and hides and selling out from them their own wares. In this way bronze tools

and weapons had come into Britain, and if at that later time there was a less call for bronze edge tools, other bronze goods might still have been welcome to British buyers.

“It was not suddenly or in a very short time that stonen tools were given up for bronze ones, or bronze for steel ones, by all tool-wielding hands. The tool of the new kind would be chosen instead of that of the older one on a rating of the cost of each, and the time and hand-force spent on the same work with each.

The hand-skill of the British maker of stonen-tools was so high, and the bronze ones might be so costly, as reckoned in the work by which he could buy it, that he kept on a long while his old tool.

“Although the English have been in North America for so many generations, and went thither, so to speak, with iron tools in their hands, and as their settlements have spread westward tribe after tribe must have known of steel, yet even now it seems there may be found red men who with the old skill in stone chipping make for themselves stonen tools instead of buying iron ones.

“It does not follow that because stonen-tools found now in the hands of tribes of the South Seas are in shape and in angle of edge, and curve of the cutting side of the blade, most closely like those of the old tribes of Europe, that one tribe copied any pattern of the tools of the northern ones. The shape comes by experience from the laws of nature. A man without metal who wills to cut wood, and takes stone as the best matter within his reach for an edge tool, finds that if the edge is too thin for the stone it will break off, and if it be too thick it will hardly cut, and so by experience he will be driven to give his tool the thickness and curve of edge and side which is best between the two evils of breaking and bluntness, and these in the like stone would be alike all over the world, and would vary with varieties of stone ; and this force of natural law on man’s work, and other doings through his experience, may be the cause of likeness of stonen tools, and weapons with ancient tribes and those of our days.”



Phenological Report on First Appearances of Birds, Insects, &c., and First Flowering of Plants

IN DORSET DURING 1915.

By W. PARKINSON CURTIS, F.E.S.



OUR records for this year shew the diversion of mental and physical energy from the pleasanter paths of scientific research to the sterner duties of citizenship in a State where freedom exists in something more than name, consequently these records are more meagre than is usual.

As far as I know no apologies are due from me on this occasion for errors in the past report ; and although I have not got any new names to add to our list of regular observers, I am glad to say that Dr. Frank Penrose, F.Z.S., M.B.O.U., is now sending me observations which will materially increase the interest of our bird notes.

The names (arranged alphabetically) of those who have sent returns are as follows, the initials prefixed in brackets to the names designate the responsibility for the record in the notes hereafter.

- | | | |
|------------|--|--------------------|
| (E.H.C.) | E. Harker Curtis. | } Aysgarth, Poole. |
| (W.P.C.) | W. Parkinson Curtis, | |
| (S.E.V.F.) | Rev. S. E. V. Filleul, All Saints Rectory,
Dorchester. | |
| (R.D.G.) | R. D. Good, Dorchester. | |
| (J.M.J.F.) | Rev. Canon J. M. J. Fletcher, The Vicarage,
Wimborne Minster. | |
| (E.F.L.) | Rev. E. F. Linton, Edmondsham Rectory, Dorset
(post town, Salisbury). | |
| (G.R.P.) | G. R. Peck, Muston Manor, Puddletown,
Dorchester. | |
| (N.M.R.) | Nelson M. Richardson, Monte Video, near
Weymouth. | |
| (E.S.R.) | E. S. Rodd, Chardstock House, Dorset. | |
| (J.R.) | The Rev. J. Ridley, Pulham Rectory,
Dorchester. | |
| (E.E.W.) | Miss Ellen E. Woodhouse, Chilmore, Ansty,
Dorchester. | |

With regard to the "Earliest Records" Mr. Linton writes to me (under date 21. 8. 1915): "Some of the first dates of flowers seem remarkably early—I have singled out three that are very curious, in case you may like to verify them. Of course, some plants are very erratic. Bush Vetch always has leaves before flower, so that this record of flowers earlier than leaves looks funny." Unfortunately I have lost the slip of paper on which Mr. Linton noted the three records, but our botanical contributors would oblige by keeping a very keen look out with regard to those plants which have records that strike them as unusual.

With regard to the birds, I have adopted the order and nomenclature used in "A List of British Birds compiled by a Committee of the British Ornithologists Union," 2nd edition, 1915, as being the latest and most authentic nomenclatorial list.

Since the above was written the Summer Time Act has altered clock time, which is no doubt beneficial to the community, but I desire to state that obviously mean solar time must be used for all scientific observations, so that in this report I shall adhere to mean solar time.

MAMMALS.

In the Wool and Wareham districts it has been an extraordinary season for foxes, stoats, and weasels, which is probably owing to there being less hunting and shooting than usual. We have 30 stoats hanging on a tree in one spot at the present time (S.E.V.F.).

Mustela martes, Linn, Pine Martin. A record of this interesting little animal was sent during the year, but I am regretfully compelled to reject it for want of precision. As the animal has been recorded from Hants fairly recently the record is possibly correct, but as the animal was only seen for quite a short time and is unfamiliar, I should prefer, before admitting a record, to see the skin of a Dorset specimen. (W.P.C.).

Name of Bird. B.O.U. Handlist, 2nd Edition.	Earliest previously recorded date for Dorset.	Edmond- sham. E. F. L.	Poole District. W. P. C. E. H. C.	Berewood. W. P. C. E. H. C.	Austy. E. E. W.	Dor- chester. G. R. P.	Dorchester. R. D. G.	Dorchester. S. E. V. F.	Pulham. J. R.	Wey- mouth. N. M. R.	Chard. E. S. R.
(12) <i>Caprimulgus</i> <i>europeus</i> The Nightjar	Apl. 8 Apl. 21 Aug. 17 Oct. 6 Mar. 20(10) May 4	.. .. .. .. .. ..	May 11 June 15(21) *July 11	.. .. .. .. .. ..	.. .. .. .. .. ..	.. .. .. .. .. ..	.. .. .. .. .. ..	.. .. .. .. .. ..	.. .. .. .. .. ..	.. .. .. .. .. ..	June 15 see note below Apl. 29
(13) <i>Crex crex</i> Corncrake	Apl. 13 Apl. 28 Oct. 10	May 2(20) May 1	.. .. ..	.. .. ..	Apl. 27	.. .. ..	.. .. ..	.. .. ..	See note below May 10	......	......
(14) <i>Streptopelia turtur</i> The Turtle Dove	Apl. 13 Apl. 28 Oct. 10	May 2(20) May 1	.. .. ..	.. .. ..	.. .. ..	.. .. ..	.. .. ..	.. .. ..	May 10	.. .. ..	Apl. 29
(15) <i>Turdus pilaris</i> The Fieldfare	Apl. 21 Aug. 26 Apl. 17 Nov. 22	.. .. .. ..	Feb. 26(15) .. Feb. 26(15) ..	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. ..	Nov. 2 Nov. 2	........	........	........
(16) <i>Turdus iliacus</i> The Redwing	Apl. 21 Aug. 26 Apl. 17 Nov. 22	.. .. .. ..	Feb. 26(15) .. Feb. 26(15) ..	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. ..	Nov. 2 Nov. 2	........	........	........
(17) <i>Turdus merula</i> The Blackbird	Jan. 1 Jan. 16 Jan. 1 Jan. 5 Jan. 1	Feb. 11 Mar. 25(12) Mar. 3	Feb. 14 Feb. 24(16) Feb. 21(15) .. ..	.. .. .. .. ..	Feb. 20 Feb. 20 Feb. 23 .. ..	.. .. .. .. ..	Jan. 1 Mar. 1(13) Feb. 1 Feb. 1	Jan. 15 .. Feb. 26 (Apl. 10 young)	Apl. 2	Feb. 8 Feb. 4	........
(18) <i>Alauda arvensis</i> The Skylark	Jan. 1 Jan. 16 Jan. 1 Jan. 5 Jan. 1	Feb. 11 Mar. 25(12) Mar. 3	Feb. 14 Feb. 24(16) Feb. 21(15) .. ..	.. .. .. .. ..	Feb. 20 Feb. 20 Feb. 23 .. ..	.. .. .. .. ..	Jan. 1 Mar. 1(13) Feb. 1 Feb. 1	Jan. 15 .. Feb. 26 (Apl. 10 young)	Apl. 2	Feb. 8 Feb. 4	........
(19) <i>Corvus frugilegus</i> The Rook	Jan. 1 Jan. 16 Jan. 1 Jan. 5 Jan. 1	Feb. 11 Mar. 25(12) Mar. 3	Feb. 14 Feb. 24(16) Feb. 21(15) .. ..	.. .. .. .. ..	Feb. 20 Feb. 20 Feb. 23 .. ..	.. .. .. .. ..	Jan. 1 Mar. 1(13) Feb. 1 Feb. 1	Jan. 15 .. Feb. 26 (Apl. 10 young)	Apl. 2	Feb. 8 Feb. 4	........

WINTER MIGRANTS.

RESIDENTS.

A—arrival. S—song, and where no song, call note. N—nest. D—departure. H—has wintered. *—that the date of arrival, song, or nesting is earlier, and the date of departure later than any previous record in Dorset.

The Stations are arranged as near as may be from East to West.

(1) No distinction is made between the races. (2) See Vol. xxxvi. p. 125 (3) See Vol. xxxv. p. 190. (4) One young swallow alone returns to roost in shed where reared; the rest went a few days earlier. (5) First egg June 12. (6) At Wool. (7) See Vol. xxxv. p. 185. (8) Heard at Crippleslyde, 3 miles from Edmondsham on April 19. (9) At Moreton. (10) See Vol. xxxvi. p. 109, note 21. (11) See Vol. xxxvi. p. 109, note 22. (12) Two eggs. (13) First egg March 20. (14) See note Vol. xxxvi. p. 125, at Swanage. (15) At Swanage. (16) A nearly completed nest at Godlingstone. (17) At Swanage, reported by Dr. Penrose who considered that the *P. calypita* seen on the 23rd were true immigrants. (18) At Wareham, by Mr. F. W. Lacey. (19) At Swanage, reported by Dr. Penrose. (20) Two observed at Penridge Down. W.P.C. and E.H.C. (21) At 7.30 in the morning in weak sunlight. (22) A winter resident. Mr. Good has promised a further note on this when his release from military duties enables him to get at his note books.

BIRDS.

Passer domesticus, The Common Sparrow.

1 June at Poole, Mr. J. T. Curtis saw two common sparrows trying to catch a small geometer (probably *Melanippe fluctuata*), but as both birds went for it at once, neither got it. (W.P.C.)

Fringilla ccelebs, The Chaffinch.

9 May at Canford. This bird was sitting in a very accessible situation in an old dead furze hedge, so we decided to observe her closely—

15 May. She had hatched off.

16 May. E.H.C. started work at this nest 1.10 and noted as follows :—

1.15 male fed young on what looked like small tortrix larvæ.

1.25 male came to nest again with a beak and throat full of small larvæ, some of which I recognised as geometers. All the larvæ were dead. The food was in every instance the same, and 6 or 7 seemed to be the number of larvæ brought each time. They were almost all of them green or pale yellow ; I saw no brown larvæ at all. The parent put the food right down the throat of the young, of which there were five, and I found the young were unable to swallow a small dead larva put into their mouth. They were little yellowish " hairy " nestlings, with mouths of crimson with pale yellow edges to their beaks. The male was extremely quick in feeding the young, and no sooner had he finished than he bolted. The female behaved in a most silly manner throughout, fluttering in a very nervous way up and down beside the tent, and in and out round the nest. She came to the nest several times with food in her beak, entering the nest from behind, and immediately bolted straight out of the front.

1.35 male fed young.

1.45 female bolted out of the nest, back to front.

1.50 female came to the nest with food and bolted out without feeding.

1.51 male fed young and cleaned young birds' excrements away.

1.55 male fed young, entering from back of nest as usual and afterward flying out of the front.

1.58 male fed young. I whistled to him and he paused, afterwards finished teeding young and fled quickly.

2.3 male came and fed young and cleaned nest. The hen fled about round the nest, but would not go on.

2.5 hen pitched at back of nest and bolted straight out past the camera. 2.10 and 2.15 male fed young.

2.30 male fed young and ate their excreta. The hen fluttered round nervously. 2.22 male fed young.

2.23 hen pitched on the back of the nest and bolted straight out. 2.24 she returned, fed the young and cleaned the nest.

2.25 the cock, and at 2.33, the hen fed the young.

2.51 hen came to the nest and then bolted.

2.52 cock fed young whilst hen fluttered round nervously ; at 2.55, 2.58, and 3 p.m. female came to the nest, but did not stay. 3.1 she came again and fed all the young, but was in a highly nervous state ; she brought the same character of food as the cock.

3.15 male fed young and cleaned the nest. 3.30 male fed young again. 3.25 hen came in and bolted again.

3.30 male fed young and cleaned nest, while the hen kept around in a nervous state of flutter. 3.40 the cock fed young and cleaned nest.

The young fidget all the time and whenever either parent comes they crane up their heads. At the sound of footsteps or even the bustling of a pigeon they are as still as death, yet they are only a few days old and can only, just to say, see. Still, they are not so knowing as one would assume, for while they are nervous of footfalls, yet if I disturb the leaves near the nest gently they think more food is coming.

3.45 male took excrement away after feeding young. I have only seen him consume it once.

At 4 o'clock I put a bit of furze at the back of the nest to try to make the cock come to the front (but he found his way

in as before), whilst I was outside the cock came back and I surprised him feeding the young. He froze still, and as he did not offer to move for about two minutes I crept into the back of my tent and got a very satisfactory picture of him.

At 4.15, 4.20, and 4.35 the male came and fed the young, and thereafter I stopped observing. With regard to the behaviour of the hen I came to the conclusion on reflection that I had alarmed her by accidentally letting off the focal plane shutter on my camera whilst arranging myself in the morning.

23rd May. I had another try at this nest. I started at 11.10.

11.10 male and female both came round the tent "pink pinking," neither of them had the courage to come to the nest, but fluttered round every once now and again.

11.45 hen fed two juveniles and quitted in a hurry.

11.46 cock fed juveniles and cleaned nest. Both birds by this time seemed reassured in a measure. 11.48 hen arrived with a whole mouthful of green larvæ, fed two juveniles and bolted very scared and "pink pinking." 11.49 cock came to the front of the nest with his mouth crammed with 9 or 10 larvæ, all green ones; he fed the young and then stood fidgetting on the edge of the nest.

The young birds were hardly still a minute; they were then so big that five of them in a small nest was a bit of a crush, and they kept elbowing one another about, but notwithstanding they seemed to keep their positions in the nest. Now and then one would heave itself up and flap its little wings after the manner of a duck, and the way the other little birds put their heads down out of the way was amusing to watch. I concluded they would soon be out of the nest, and, positively, when I left them in the evening their feathers seemed to have grown since morning. The young spent a great deal of time preening themselves. I doubt not that their growing feathers tickled them. When the sun was hot they kept their mouths open and showed bright crimson throats, but I never heard them make any sound except the little chirruping squeaking noise which seems in some form or other common language

to many nestlings. The near approach of the parents was always announced by much head craning. The foregoing is a summary of my observations made from time to time in my note book, but gathered together afterwards.

11.52 hen hurriedly fed the young. 12 (noon) and 12.10 the hen fed the young. 12.15 the hen came to the nest and bolted straight out. Both birds seemed as wild as hawks this day; it may possibly be the high wind, which caused the tent to flap a good bit, that alarmed them.

12.30 and 12.32 the hen fed the young, but was very nervous.

12.33 the cock fed the young and cleaned the nest. 12.37 the hen came to the nest and fed young. The cock was as wild this Sunday as the hen was last, and I think the trouble with both birds is that they know that I am inside the tent.

12.50 hen came to the nest, fed young and bolted, and then I went to lunch. 1.45 I went into the tent; both parents were "pinking" round and saw me go in. 2.0 hen fed the young, after a few turns of bolting over the nest.

2.11 the cock fed the young and waited at the nest. 2.30 the hen was alarmed by a passer by. 2.35 the hen bolted over the nest. (It might be explained that this phrase is intended to convey that the hen entered the nest through the bushes at the back, but instead of staying to perform her duties she simply jumped straight over the nest and flew out at the front.)

2.55 the hen fed one young bird and bolted. 2.56 the cock fed all the young, cleaned the nest and waited, paying no attention whatever to the shutter. 3.5 hen came to nest with food and left hurriedly. 3.15 both birds fluttered round and one of the young stood up, shook his wings and then spread them out fully.

3.20 cock fed all the young. 3.25 both birds came to the nest and waited. 3.27 the cock came and fed all the young, after which the hen came and did the same. 3.28 the cock again fed the young.

3.29 the hen came to the nest with food, but bolted without feeding the young. 3.33 the male fed the young from the

front of the nest. The food brought by both birds was still green larvæ.

3.50 Hen came to nest, fed one young bird and bolted.

3.55 The cock fed the young. 4. The cock fed the young and cleaned the nest. I then left.

24th May. The young had quitted the nest by one o'clock when I went to inspect. (E.H.C.)

(It will be noted that the young birds were only in the nest about 12 days).

Acanthis cannabina (The Linnet).

10th April, E.H.C. listened to a song contest by about 7 or 8 males. They sat in the upper branches of an oak singing, whilst the females sat in the lower branches listening. (E.H.C.)

Acanthis linaria cabaret (The Lesser Redpoll).

2nd April. Two seen at Canford. (E.H.C. and W.P.C.)
Motacilla lugubris (The Pied Wagtail).

The only notes on this bird relate to downward movement. On 8th August at Handley Down it was evidently flocked and moved downwards, whilst on 22nd August at Swanage Golf Links between 20 and 30 were seen together in a party. (E.H.C. and W.P.C.)

Motocilla raii (The Yellow Wagtail).

Upward migration.

7th April. One at Kingston Hill, Purbeck. (Dr. Penrose).

Downward migration.

7th August. Two seen at Canford. (E.H.C.).

We have discovered that it is our own fault we do not see more of this bird than we do. (W.P.C. and E.H.C.)

Anthus pratensis (The Meadow Pipit).

27th March. An unusually large number in the neighbourhood of Little Sea, Poole Harbour. E.H.C. came to the conclusion that there had been an immigration. Dr. Penrose about this time noted an unusually large number in the Swanage neighbourhood. (W.P.C. and E.H.C.)

Certhia familiaris britannica. (The British Tree Creeper).

22nd May. We found a pair feeding young in a crevice in an open barn. E.H.C. saw the bird take in a geometer



CERTHIA FAMILIARIS BRITANNICA *Ridg.*
THE TREE CREEPER.

♂ at nest with a beakful of insects,
Canford, Dorset, 1915.

moth, *Panagra petraria*, wings and all ; it carried the insect by the terminal portion of the abdomen. The insect was dead and did not flutter.

23rd May. At 1.45 W.P.C. put up to this pair, but the sexes of the birds were nearly impossible to tell, and in W.P.C.'s notes which follow the sexes are given with reserve, and the determinations are based on behaviour as much as anything.

2.0 Bird left. 2.2 Bird popped in very quickly. 2.5 Male (?) with a green larva. 2.30 Both birds together.

2.35 and 2.40 One bird only. 3. Bird with 4 small grey moths, looked like *Scoparias*.

3.7 Bird with what looked like a woodlouse. 3.15, 3.17 and 3.26 Bird came in. 3.28 Bird came with larvæ.

3.30 Bird came with two grey geometers, looked like *Lobophora halterata* (this insect occurs very sparingly near the nest, and abundantly about 800 yards or so away from the nest).

3.45 Male with large mouthful of insects (the enlarging camera shews that the insects were mostly diptera).

3.48 Bird again. 4.12 Bird with a whole beakful of hymenoptera and diptera (the enlarging camera shews also a spider, some of the hymenoptera are ants).

4.30 Bird again. I then stopped.

The quick jerky movement of this bird is very disconcerting indeed, and unless one gets them in a position of rest between the jerks 1.22nd of a second exposure gives a mere blur. They seem unable to travel backwards easily, at which the Lesser Spotted Woodpecker (*Dryobates minor*) is expert. They pitch below the nest and jerk up and in, and leave by jerking themselves upwards out of the nest. They seem very tame and fearless little birds, but usually announce their arrival with their mouselike little squeak. Of course a worker whose hearing was good would stand a much better chance than I should, as the scratching of the birds' claws on the bark would be audible.

24th May. 1.25 I had another try at this pair of birds, and I let them come in once or twice before I settled to making

notes, as I was anxious to see what the focus of my camera and the composition of the picture was like.

1.35 One bird (subsequent behaviour made me believe this to be the hen) came in whilst I was endeavouring to make a ventilation hole in the tent which was insufferably hot. I could not see what she brought. She stayed on the nest.

1.47 The cock arrived and the hen then left; the cock entered the nest but only stayed a few minutes.

1.52 Before I could change a plate or enter my notes, one bird was back with a beakful of small greyish micros like some *Tortrix*, say, about the appearance of *Sericoris lacunana*.

1.53 The second bird, with more small grey moths.

2.0 One bird came and went in very quickly—the second came and I snapped it, but it flew off and returned almost immediately and entered the nest. I heard both birds give their squeaky little call before they came to the nest.

2.4 One bird arrived with a bill full of larvae, mostly Geometrae, and the other bird left the nest; the first entered, stayed about one minute feeding the young. How the second slipped in I do not know. I think however I can hear the young squeak.

2.20 One of the birds arrived and left quickly, and the second before I could write my notes; both brought small insects (? order).

2.24 One came in, but dodged across from a position that did not permit of close inspection. This bird (? the female) stayed on the nest till at 2.31 the other came, and the bird that had been in hung on a pole outside the nest, vibrating its wings very rapidly, for all the world like a large hawk moth about to take flight. I was unable to get a picture of this attitude as they pop in and out very quickly.

2.38 One bird came in, but I find they undoubtedly have a back way in, as they can pop in without coming to the front at all. Just as I was going out to investigate this the second bird arrived. I shifted the tent round a trifle and then went inside the log hut to find the nest quite open at the back, so I arranged matters to prevent the birds entering or leaving

the nest at the back. I did not get settled again till 3 o'clock.

3.4 The cock came with 3 or 4 diptera and I felt sure a *Nemophora swammerdamella*. The hen was on the nest brooding, she came off to enable the cock to feed the young, and when he had done so she went back. I could see her tail as she turned about in the nest. The young then were mere little pats of black down.

3.17 The female left the nest, she seemed very fidgetty all the time she was there. 3.25 One bird back with a whole beakful of small insects, but I could not see what they were.

3.25 Bird back with larvae and insects. 3.35 Bird back with larvae. 3.38 One bird back. It stayed and looked at the tent, and I was able to see that it certainly had woodlice in its bill. I felt sure it was the female, as she afterwards went to the nest and brooded.

3.45 Cock came, hen left, and cock came to the entrance, evidently eating excreta. This was the first time that I saw any evidence of any method of cleaning the nest. He then left through the shed.

3.55 Bird came in, and just as I was writing my note the second arrived, but as they have taken to go out sideways between the poles of the hut I had to go out to close that exit.

4.10 One of the birds came in, but left again almost immediately; it had a mouthful of small insects, including two moths.

4.20 Both birds came, but I could not see what food was brought.

4.22 Cock with larvae. The hen came off the nest and fluttered about outside. The cock and the hen sported together a minute or two. The hen's tail was visible all the time she was on the nest, and she fidgetted a great deal.

4.30 The hen came out, but before I could write my note the cock came in and fed the young. 5.5 Another bird came in, after which I left.

The birds are easy to photograph if you get them at the moment of rest, but if you happen to snap them just as they jerk on there is nothing but a straight streak on the plate ; 1-50th of a second being quite useless to arrest the movement. An examination of the bad plates shewed that the bird jerks itself forward by a flexing action of the leg, aided by the tail, as in several cases the tail shewed slight movement, the bird much movement, and yet the feet were quite sharp. The turning movement in entering the nest also shewed on several occasions that practically the whole bird had turned before the feet were moved. (W.P.C.).

Sitta caesia (The Nuthatch).

11th April, E.H.C. observed a bird on the outskirts of Bere Wood, collecting mud from a ditch. It got a lump about one inch long and about $\frac{1}{4}$ of an inch in diameter and took it into the wood ; we followed for 300 yards and found the bird plastering an old woodpecker's hole, 18 feet up an aspen poplar.

17th May. A nest was finished in an old woodpecker's hole at Canford, but on the 22nd May the birds had been dispossessed by *Picus viridis*, which cut out all the mud, did some chipping and then abandoned the hole. *Sitta caesia* is a dear little bird and most inoffensive, and its attachment to its nest is particularly strong, yet it is as much persecuted by starlings, woodpeckers, and squirrels as any bird we know. (E.H.C. and W.P.C.)

Parus ater-ater (The Continental Coal Titmouse).

In the later part of January two specimens of this bird came into an araucaria on several occasions outside my window at the nursing home in Parkstone, where I was confined with appendix trouble ; as my bed was within 20 feet of the tree I am satisfied as to identity. (W.P.C.)

Parus ater-britannicus (The British Coal Titmouse).

22nd May. On this date our nesting box No. 32 at Canford contained a whole brood of young birds.

24th May. E.H.C. put up his tent to this nest. His notes were as follows. :—

" This nesting box had been specially placed with a view to photography. Although the light registered 25 secs. on the meter at the nest, in bright sunlight through the trees, it is really wonderful how the green leaves soak up the sunlight. I found I was unable to distinguish the sexes. On every occasion the food brought was green larvae, except once when the bird was so quick that I was unable to identify the food. The times of feeding were 1.40, 1.48, 1.50, 1.51, 1.54, 1.56, 1.59, 2.1, 2.4, 2.8, 2.10, 2.14, 2.15, 2.16, 2.20. At 2.25 I went outside the tent to test the light, which had become very dull, and it was three o'clock before I heard the birds having a consultation near the nest, then they went away till 3.10, At 3.11, 3.15 and 3.21, the birds fed the young, after which I had to leave." The birds are very quick in their movements, but not very difficult, as they pause and stay quite still for a moment, and one can judge their movements. (E.H.C. and W.P.C.).

Parus palustris dresseri (The British Marsh Tit).

After examining a very large number of nests of this bird we have come to the conclusion that its favourite material is roebuck hair (where available), which partiality is also shared by *Parus ater-britannicus*. As it is necessary to clean every nesting box at the beginning of each season, and as we have careful charts of the boxes and what bird is using them, there is every opportunity of forming a satisfactory conclusion, since the materials keep well in the dry boxes, and after the young birds have flown one can examine the nest at one's leisure. We have had boxes out for 4 seasons, anything from 20 to 50 in a season. So far *P.c. obscurus* and *P.m. newtoni* with equal opportunity have eschewed this material.

23rd May. This bird was feeding young in one of our nesting boxes at Canford. (W.P.C. and E.H.C.).

Parus borealis kleinschmidti (The British Willow Titmouse).

This bird has not, so far as I am aware, hitherto been recognised in this country, but Dr. Penrose gave us some particulars of it and suggested that it should, so we kept a sharp look out. I am pleased to be able to record that we are

satisfied that we have seen at least two pairs. The differentiation is to be found in Hellmayr Orn. Jahrb XI. p. 212 (1900) a not very accessible book, written in a language not generally cultivated just now.

Dr. Penrose, however, writes to us as follows :—

12th May, 1915. I went to the Natural History Museum and had out the series *Parus palustris dresseri* to compare with *P.b. kleinschmidti* and made the following notes.

P.p. dresseri (The English Marsh Tit).

The feathers of the blackcap on the crown of the head are crisp and short, which gives a definite bright, satiny appearance. The end of the tail is almost square.

P.b. kleinschmidti (The English Willow Tit).

The feathers of the head are longer and looser, and give a much less glossy—a more velvety appearance. The end of the tail is distinctly graduated. There is a reference to the distinctions mentioned above in "British Birds" Vol. I., p. 44, by W. Rothschild.

Dr. Penrose illustrated his letter by sketches shewing that the tail of *P. b. kleinschmidti* was, when spread, very decidedly excurved in contour at the extremity and very decidedly crenulate.

We came to the conclusion after watching one pair for an hour or two and comparing them with *P.p. dresseri* in the neighbourhood that the latter had the appearance of having its "hair" nice and tidy whilst the former had "towzled hair."

4th April. At Canford we observed a pair busily boring a hole out in a rotten oak limb.

1st May. One of a pair at Canford that had selected and partially hollowed out a decayed holly stump was scrutinized by Dr. Penrose and pronounced by him to be *P.b. kleinschmidti*. This pair laid 4 eggs and then for no apparent reason disappeared, possibly they came to an untimely end. (W.P.C. and E.H.C.).

Aegithalus caudatus roseus (The British Long-tailed Titmouse).

4th April. A nest partly lined with feathers at Canford. (W.P.C.).

10th April. A completed nest at Canford. (W.P.C.).

A completed nest at Durlstone Estate Garden, Swanage. (Dr. Penrose).

25th April. A completed nest at Berewood with the entrance facing full south and open to the midday sun, not a usual aspect in our experience. (W.P.C.).

1st May. On this date the nest found on the 10th ult. was occupied by the hen bird sitting with her tail stuck out over the top of her head in the customary manner, and on the 15th May birds were feeding young. (W.P.C. and E.H.C.).
Lanius collurio. (The Redbacked Shrike).

25th July. A pair with their family of fully fledged young were seen at Canford Bottom, Poole. (W.P.C. and E.H.C.).

Sylvia communis (The Whitethroat).

Upward migration. April 30th—May 1st. Dr. Penrose reported that the foggy night had brought down at Swanage a large number that were evidently on migration. We saw one at Canford on the 1st May, shewing that the birds had moved in off the coast fairly promptly.

2nd May. These birds were in great numbers on Pentridge Down.

6th June. On the edge of Poole Harbour E.H.C. found a pair feeding young. The young were nearly ready to go. The nest was well concealed in a furze bush, although there was an abundance of bramble at hand.

Downward migration. 8th August. In companies on Handley Down evidently moving downwards.

9th August. One seen at Canford Bottom, if the same bird that had been there all the summer, some distance from its breeding place, but hardly migrating.

22nd August. 10 to 12 seen at Swanage in company with other *Sylvias* and *M. grisola* (q.v.)

Five seen on the Studland side of Swanage golf links. (W.P.C. and E.H.C.).

Sylvia curruca (The Lesser Whitethroat).

We got no satisfactory record of arrivals.

5th June. A pair seen feeding young at Badbury Rings, but we had insufficient time to locate the nest exactly.

Downward migration.

8th August. In companies on Handley Down, evidently moving downwards.

22nd August. One seen at Swanage in company with the other *Sylvias* and *M. grisola* (q.v.) (W.P.C. and E.H.C.).

Sylvia simplex (The Garden Warbler).

Upward migration.

1st May. One seen at Canford (see note under *S. communis*).

13th June. A nest found and photographed. We feel sure the young had left, yet the cockbird was singing delightfully quite close to the nest. We noted in 1914 that a cock *S. simplex* was in full song after the young had left a nest at Winchester.

On the 16th June 8 a.m. This same bird was still singing beautifully.

Downward migration.

22nd August. Four seen at Swanage in company with other *Sylvias* and *M. grisola*. (W.P.C. and E.H.C.).

Sylvia atricapilla. (The Black Cap Warbler.)

22nd and 23rd May. This bird was singing well on these dates at Canford but otherwise escaped our attention. (W.P.C. and E.H.C.).

Melizophilus undatus dartfordiensis. (The Dartford Warbler).

4th April. One seen at Hamworthy.

5th April. Two seen at Canford. (W.P.C. and E.H.C.).

Phylloscopus trocnilus (The Willow Warbler).

Arrivals were as follows :—

17th April. Broadstone Golf Links, a number seen.

18th April. A good number at Berewood.

20th April. There were good numbers at Broadstone.

22nd April. They were singing very vigorously at Broadstone.

30th April. Dr. Penrose reported that the foggy night brought down at Swanage a large number that were on migration.

Nesting.

8th May. A nest with 3 eggs at Canford.

23rd. This bird was still sitting.

5th June. A pair seen feeding young at Badbury Rings.

12th June. A nest-full nearly ready to go, at Broadstone.

27th June. This bird was singing well.

Departures were as follows :—

8th August. In companies on Handley Down, and evidently moving Southward.

17th August. One in Bournemouth Pleasure Gardens, obviously a downward migrant.

22nd August. One seen in company with *Sylvias* and *M. grisola* (q.v.) at Swanage. (W.P.C. and E.H.C.)

Phylloscopus sibilatrix. (The Wood Warbler.)

Arrivals.

24th April. One seen at Broadstone.

1st May. Heard singing at Canford, but not the full song, only the stridulatory trill.

9th May and 24th. This bird was in full song at Canford.

20th June. The same bird was singing a few bars of song, but without the long drawn "dear, dear, dear dear." at the end.

27th June. The same bird was still singing a little.

The downward migration escaped notice.

Phylloscopus collybita (The Chiffchaff).

The winter resident referred to in last year's report was seen on February 21st, and replied to W.P.C.'s whistling ; it was busy catching small flies in a willow tree in the Royal Victoria Hotel Garden, Swanage.

On 23rd February we again watched it from the window of the room occupied by Dr. Penrose.

Upward migration.

March 23rd. Dr. Penrose's note above (see schedule) shews the arrival of the true immigrants, which were noticed by Mr. Peck at Dorchester on the 31st.

April 4th. At Canford we heard four singing, but saw none.

April 10th. No increase had taken place in the Canford District, as only two were heard.

April 11th. Several were heard in Berewood (about 6 or 7).

April 10th—11th. Although the night was misty, Dr. Penrose records a further arrival at Swanage.

April 17th. Two only at Broadstone. April 18th. In good numbers at Berewood.

April 24th. We came to the conclusion that there was still a number of birds at Broadstone which had not settled down.

April 30th—May 1st. Dr. Penrose reported that a fog on this night brought down at Swanage a great number which were on migration.

Nesting.

8th May. The start of a nest at Canford.

9th May. One nest with 3 eggs and one building at Canford.

15th May. This last bird was sitting.

22nd May. The nest was deserted because a spruce tree had been felled near, and the other two nests were never finished. (In this connection might be considered the fact that the feathers of this bird were present in some numbers in the Sparrow Hawk's larder referred to under *A. nisus*.)

12th June. A nest full of young at Broadstone.

27th June. Heard singing at Broadstone.

10th July. A pair were feeding young out of the nest at Badbury Rings and the cock was still singing. The downward migration escaped notice. (W.P.C. and E.H.C.)

Turdus musicus clarkii (British Song Thrush).

14th February, 1915. This bird was in rather larger numbers than usual at Parkstone-on-Sea, and was in full song.

5th April. A completed nest was found at Canford.

26th December, 1915. One of these birds had started to sing at Poole. (E.H.C. and W.P.C.)

9th January. At Edmondsham the thrush sings; rare this winter, only December 28th lately. (E.F.L.)

8th January. Heard singing at Pulham. (J.R.)

Turdus merula. (The Blackbird.)

14th February, 1915. E.H.C. came to the conclusion that there was a migratory movement in progress at Parkstone-on-Sea, as he counted 14 birds in one field.

20th June, 1915. At Poole Mr. J. T. Curtis made the following observation :—

“ 8 a.m., whilst watering the front garden I saw a cock blackbird catch a brown moth and eat it. There was no mistake about it, the bird was only 4 or 5 feet from me.”

15th November. There was an abnormally large number of these birds at Canford ; we counted 50 in one small clear patch in one wood. Suggesting a Southerly movement. (E.H.C. and W.P.C.)

Erithacus rubecula melophilus. (The British Redbreast).

4th April. We found a robin had already brought off a brood in one of our nesting boxes at Canford, and we saw another carrying nesting material.

11th April. Two observed building at Berewood.

8th May. At Canford one observed feeding young, and one observed building.

9th May. This latter bird had completed and laid one egg. W.P.C. endeavoured unsuccessfully to get a really good colour record, but the lighting of the situation was so very difficult that he failed. The nest was very peculiar ; it started quite low in the bank and was built up quite 10 inches till a fairly good platform was obtained, on which the nest proper was placed. We have never seen quite so elaborate a structure by a robin and the birds must have been wonderfully industrious to get the material together, since there was more than sufficient material to make six ordinary blackbirds' nests.

15th May. This bird was sitting, 5 eggs.

22nd May. W.P.C. endeavoured unsuccessfully to photograph this bird sitting, but robins are very knowing, and whilst she would sit complacently as long as W.P.C. was not in the tent, she resolutely declined to come if he were inside.

18th June. At Canford W.P.C. observed this bird taking *Cabera pusaria* into its nest about 7.30 a.m.

Luscinia megarhyncha. (The Nightingale.)

Common in the valley of Kit Brook. (E.S.R.)

8th August. A couple seen on Handley Down moving Southward.

Be it noted that notwithstanding the numerous alleged nightingales recorded in the Poole district (we were only working the Poole area and not Berewood), we saw none "as usual." (W.P.C. and E.H.C.)

"Nightingales are not common about here (Weymouth), "but are occasionally heard in some of the woods. We have "only had one in this garden a very few times in 30 years, "and there is no other place within half a mile that has any "trees worth mentioning, so a good many birds come here." (N.M.R.)

Ænanthe ænanthe. (The Wheatear).

Inward migration (see schedule).

10th—11th April. A further arrival was observed at Swanage by Dr. Penrose.

Downward migration.

22nd August. This bird was still in evidence on the Lighthouse Down at Swanage. (W.P.C. and E.H.C.)

Muscicapa grisola (The Spotted Flycatcher).

Arrival.

12th June, one seen at Waterloo, near Poole.

Departure.

22nd August. About 40 seen, both adults and juveniles, on the road from the Quarries to Peverel Down in a distance of about 400 yards. They were hawking flies and kept calling to one another, apparently to keep company. They were accompanied by numerous *Sylvias* (q.v.).

Hirundo rustica (Swallow).

Inward migration.

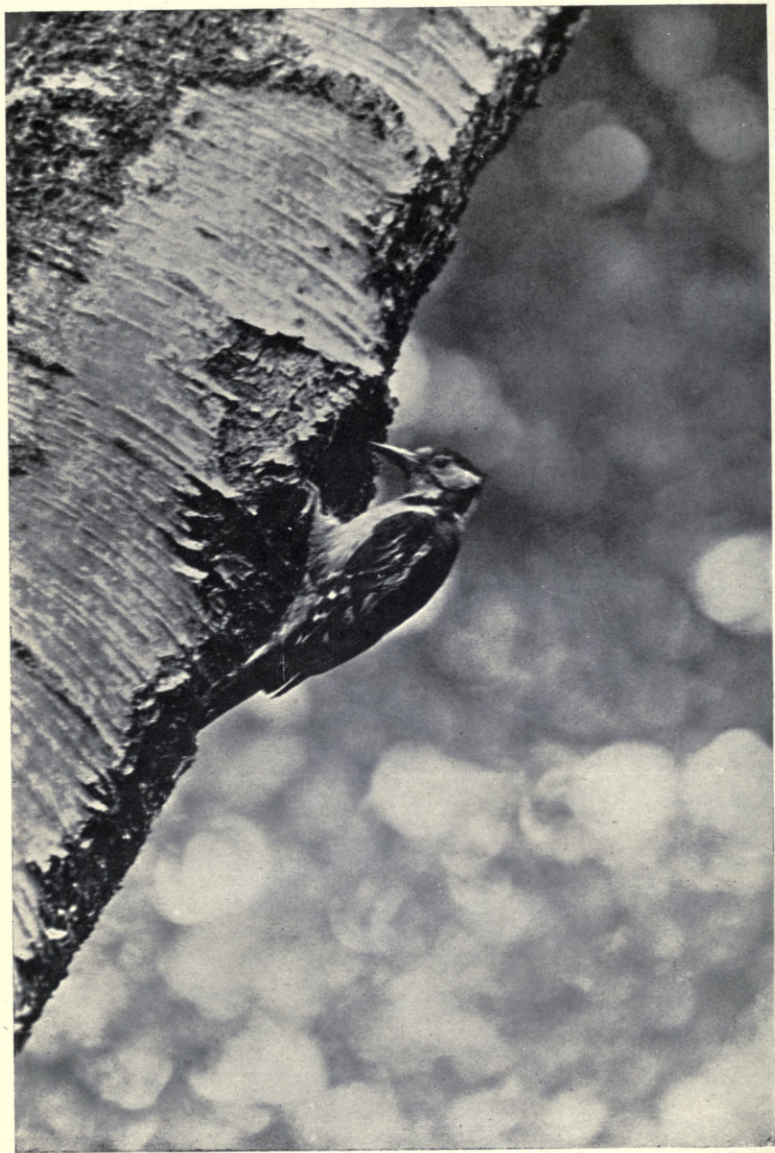
11th April. Although we only saw one at Berewood, Dr. Penrose saw seven arrive at Swanage during the Sunday.

29th April. However, 6 or 7 were observed over the Stour at Canford, and two paired at the Court House, Canford, so the major body had evidently arrived and commenced to settle in.

Departure.

2nd October. Ten to twelve seen at Broadstone.

3rd October. Two seen hawking in the High Street at Poole.



DRYOBATES MAJOR ANGLICUS *Hartert.*
THE GREATER SPOTTED WOODPECKER.

♂ at nesting hole,
Canford, Dorset, 1915.

This bird is much less common than formerly. (W.P.C. and E.H.C.)

Delichon urbica (The House Martin).

21st August. At Arish Mell numbers were hawking round the cliffs, but as there were quite a number of nests under the overhanging ledges they were probably residents. (W.P.C. and E.H.C.)

Dryobates major anglicus (The British Great Spotted Woodpecker).

2nd April. This bird had made another hole in the tree that it nested in at Canford last year. (E.H.C. and W.P.C.) (We will call this nest B).

25th April. On this date we found that the bird had been dispossessed of nest B by a starling of the usual obscene habits.

1st May. The birds had started a new hole in the rotten birch in which we first found them (Nest A).

15th May. The birds had been dispossessed of nest A by a *Picus viridis* (see notes under that name). They had, however, started to complete an incomplete boring commenced by *Picus viridis* in solid living birch, which must have been exceedingly hard work, as the wood they had taken out was solid and fibrous.

10th June. E.H.C. went down to this pair; he notes as follows :—

2. Both birds are beautifully broken to the camera. They do not care twopence for me arranging the gear; they stayed off and “churked” for two or three minutes and then went on feeding the young as if nothing had happened. The young went on “Queek queek queek” to the Nth power; they were at it all day and never stopped for a minute. I judged there to be 5 or 6 young.

3.20 Cock came to the nest, fed young, but did not go right in. 3.30 Hen fed young, entered nest and cleaned it.

3.35. The cock, and 3.36 the hen fed young. 3.39 The cock fed all the young and gave me the opportunity of seeing the food, which was grey moth bodies as far as I could judge, as I do not know any other material it could be.

3.45 The male, 3.52 the female, 3.53 the male, and 3.58 the female fed young, one of which at least came to the mouth of the nest.

4.1 Cock arrived with what I thought was a whole crop full of chammed up moths, that is what I took it to be. The young were at this stage fed almost entirely by regurgitation.

4.2 The hen, 4.8 the cock, at 4.9 the hen came to the nest. At 4.12 I gave up. While I was packing up the gear the birds came to the nest and fed the young as long as I was not actually standing under the tree. Their movements are frightfully quick and they are never still for a moment.

13th June. W.P.C. took this bird in hand, and by dint of adding additional tent poles to the tent and lashing three 5 foot poles to the tripod, and importing a pair of steps into the tent to stand on to reach the camera, we managed to get nearly level with the nest and only about 14 feet from it. While we were getting all this safely and firmly settled both birds came to the nest repeatedly and fed the young whenever we were behind or inside the tent; and since these reputedly timid and wary birds did not seem to mind our presence an atom, we concluded that they remembered the same performance conducted last year. *Picus viridis* is infinitely more shy and suspicious. (Here I digress to say that to hoist the whole tripod camera and everything to a height of about 14 feet from the ground in the way we did, and yet get the whole apparatus stable, demands an exceptionally powerful and well-built tripod; I used a two-fold Ashford 7ft. stand with a 10in. top, which is quite the most powerful and rigid stand I know, the ample size of the top being a godsend under such conditions).

9.55 Male with moth (species?) and about 8 geometer larvæ.

10.5 One bird, could not see sex or food.

10.15 Female arrived with a mouthful of larvæ. I made a noise putting up my hand to get at the shutter, and the bird cleared off for about 5 minutes. (E.H.C. doubts this being the reason why she cleared off and states that at this time he was standing under a starling's nest in the immediate neigh-

bourhood, and that the starlings were making a tremendous fuss ; he suggests that this was the real reason why the bird went off). The bird uttered her alarm call, and during the time she was uttering it the young in the nest were very quiet; but as soon as she left off they recommenced their noisy chatter. The bird finally came to the nest and departed after feeding the young.

10.22 Male arrived and fed young ; he announced his arrival with a single "churck." 10.32 One of the parent birds arrived ; could not see what was brought, but noticed that the young raised the pitch of their note on the parent's arrival.

10.37 Male with small insects and larvae ; he was too quick for certain identification of the food. 10.43 Young stopped calling (This is really a very noteworthy event, for this brood were quite as vociferous as the one referred to in 1914).

10.44 Young resumed calling ; female arrived, fed them, and then they became more vocal than ever. The female was quite silent. The young are now about half the size of their parents, and their crests are quite red.

10.45 Male with insects and larvae, including what looked like a large geometer moth of grey color (? *Boarmia consortaria*)

10.52 Male fed young. I gave him a very quick instantaneous exposure, and at the "ping" of the shutter he "churcked" for about half a minute, but did not leave the nest ; afterwards became quiet and then left. The young ceased calling while the male was speaking.

10.55 One of the birds fed the young and popped off again quickly. 11.1 Female, with some very small food.

11.3 Male fed young, but hen came before I could move and fed the young again. 11.10 Male, 11.15 male again, followed immediately by female. 11.19 One of the parents.

11.20 Male again, followed immediately by the female, who took no notice of the noise of changing the plates, and was very leisurely. 11.29 Female again. 11.32 Male came. I tried to get him to look up and stay still by calling and shouting

to him ; but he took not the smallest notice, and went on feeding the young with his head in the hole.

11.34 Male again ; he fed the young by regurgitation. 11.36 Female with very small food. 11.40 Female, with two large green noctua larvae, undoubtedly the larvae of *Taeniocampa stabilis* ; they were carried in the base of the bill, and were passed up by the tongue to the young bird. Both larvae were given to the same young one. 11.43 Female with 3 or 4 larvae of *Cheimatobia brumata*.

11.50 Male, with a great number of small insects quite indistinguishable ; he fed two young birds with them.

11.55 Male with several larvae and at least one *Tephrosia punctularia*. As the light then went completely off the tree I left to do some general photography I was desirous of doing. 4.0 I came back to get a photograph of the tent at full height, and whilst I was photographing the tent the male came in bringing 4 large gray geometer moths (? *Boarmia repandata*). Note. I had seen *B. repandata* at rest on a tree not far from the nest, so I know it was out.

June 16th. E.H.C. visited this pair of birds and was ready at 7.45 a.m. His notes were as follows :—

7.50 Hen came to the nest with larvae and other food.

7.51 Cock brought larvae ; on both occasions the feeding was partly by regurgitation. The young birds have been behaving as usual, chattering away all the time since we got within earshot. The cock and hen did not feed the young birds while we were getting up our gear, but stayed about "churcking" as I have before noted, and very much after the manner of a blackbird's alarm note.

8.5 Female fed young with larvae.

8.10 Cock, 8.13 hen, and 8.25 cock, fed young. 8.29 Cock fed young partially with food in his beak, which I could not see, and partly by regurgitation.

8.35 Hen brought body of a grey moth and a large geometer larva. 8.39. Cock brought brown larva which did not look to me like the larvae of lepidoptera. 8.44 Hen fed young in great haste. 8.48 cock fed young very rapidly.

8.55 Hen ; 8.58 cock ; 9.1 hen ; 9.6 hen ; 9.12 cock ; 9.20 cock again fed the young. The young have not stopped chattering ; the noise rises and falls, growing most vociferous when the parents arrive with food, but the young are no reliable guide as to the arrival of the parents, as they give so many false alarms.

9.27 Hen ; 9.28 cock ; 9.33 hen ; 9.34 cock ; 9.40 hen fed young. The sun now went off the nest so I left ; but while I was packing up, both birds came to the nest and fed the young ; they "churcked" whilst I was outside; but the moment I went inside they took no notice, notwithstanding that my feet were in full view.

18th June. E.H.C. had another try at these birds. His notes were as follows :—The hen fed the young twice while we were getting the gear up, which work we completed at 7.20. 7.25 Cock came to the nest with a good deal of "churcking ;" both birds "churcked" a good deal whilst we were setting up.

7.28 Cock ; 7.37 hen ; 7.42 hen again. The young chattered all the time. I did not hear more than two at a time, and usually only one, they are silent for a few seconds at rare intervals.

8. Cock and hen came in quick succession and fed one young bird that came right up to the entrance and craned out so far that I thought he would lose his balance. 8.5 Cock fed young.

8.7 Hen fed young. From what I could hear and surmise as to the behaviour of the young, as soon as one has been fed a few times there is a good deal of scrambling and elbowing in the nest and another young one comes to the entrance.

8.10 One young bird put his head and neck a long way out, and I could see his lovely little red crest. His head and neck are well feathered.

8.14 Hen fed young by regurgitation. 8.22 and 8.30, hen fed young. 8.34 the cock. 8.39 The hen came with food, and there was a struggle between two young as to which should have the food. One of the young was looking out and chattering, and I calculated he uttered 250 cries per minute.

8.46 and 8.47 and 8.57 the cock fed the young. 9 Hen ; 9.4 hen ; 9.10 cock, 9.14 the hen fed the young.

20th June. W.P.C. paid further attention to these birds. He notes as follows :—

7.30 Settled in with all the gear ready. 7.32 Bird fed young, which have made marvellous progress in a week ; they very nearly resemble the adult birds, and keep looking out of the hole, and are much more noisy than they were a week ago.

7.40 One of the birds fed the young by regurgitation. 7.46 Another of the parents came. 7.50 One of the birds brought a number of Dipterous flies and hymenoptera of no great size. 7.57 Cock ; 7.58 hen and 7.59 cock fed the young.

8.3 Hen brought larvae for the young which appeared to be *Hybernias*. 8.8 Hen and 8.14 cock fed. 8.20 One of the birds fed the young on larvae. 8.25 Cock fed young, but seemed alarmed at something, hen followed on quickly, but left in a hurry. 8.34 The hen again. 8.35 The male with two small moths about the size of a *Melanippe fluctuata* probably *Melanippe montanata* or possibly *Coremia ferrugata* and various other oddments. (I think since that these moths were almost certainly *Coremia ferrugata*, which was at rest on the tree trunks in the neighbourhood in fair numbers, that is to say, I found several at rest at varying heights on birch trees mostly from 4 to 7 feet from the ground).

8.42 The cock fed. 8.47 The cock came to the nest, but dropped straight down to the ground suddenly and made off in a zig-zag direction, which I put down to the advent of a hawk, as all the birds were silent. (E.H.C. saw a female *A. nisus* go over just about this time, evidently on the war path). Both birds gave their alarm notes.

8.49 The hen fed. 8.50 the cock. 8.54 The young were quiet for a few seconds. 8.54-30 The female fed. 8.56 Male brought a grey noctua rather smaller than an average sized *Acronycta psi* and about the same colour ; male "chucked," but not in alarm, he apparently was calling the female.

9.0 Female fed, while male called a little way off. I went out to get more plates. 9.30 Male fed young. He afterwards

went down amongst the bracken and hunted the low stems of small birch ; he roused a little *Scoparia* off one and chased him down to the ground ; but I did not see whether he caught it, as a lot of bracken intervened. I afterwards saw him searching on the ground for food, and he seemed to be making a meal for himself. Now and again he gave a " churck, " which made the young renew the vigor of their chatter, which was not so incessant as usual.

9.55 and 10.5 The hen fed young. At 10.6 the male, after which I left the nest for a time, as E.H.C. wanted my high tent and stand moved up to a *Picus viridis*. Before doing this, however, we thought we would test the liking of the young for a moth, so we put a *Cabera pusaria* in a slit at the end of a stick and offered it to one bird ; as we came close to the nesting hole to do this the young bird drew back, but as soon as the youngster caught sight of the *Cabera pusaria* he went for it with all the vigour of a hungry bass going for a smelt, extracted the moth from the slit in the stick, bolted it wings and all, and emphatically showed his appreciation by chattering and craning out of the hole and looking in our direction for more. I returned to the nest and set up a small tent to watch from with the binoculars, as I hoped that I would be able to determine the food brought with greater accuracy.

1.40 The young were very active and noisy. 2.7 Male brought small food, fed the young. This young bird is evidently learning to speak, and has now added a chirp like a sparrow, repeated in a warbler fashion, and not altogether unlike a robin's warning note. The time that elapses between meals for the young as the day advances, as compared with the early morning, all goes to shew in my opinion that the food of these birds is insects, including lepidoptera taken at rest. It is notorious that unless you go trunk-searching and fence searching before the sun is high your success is small, and apparently the woodpeckers find the same difficulty as we do.

2.22 Male fed. 2.27 Male fed the young by regurgitation. 2.29 Female fed also by regurgitation.

2.40 Hen fed young partly on a larva or two and partly by regurgitation. I am convinced that the latter process was resorted to, as the bills of the young bird and parent bird were parted. I distinctly saw a rope of saliva from the one to the other. The bill of the young bird is much greyer than that of the adult, especially about the lower mandible, and the white of the plumage is very yellow, almost primrose coloured. (E.H.C. suggests that the yellow may be a result of continual contact with the birch tree.)

2.55 Male brought moth that looked like a *Bupalus piniaria* female for size and colour. 3.20 Male fed young. 3.22 male fed young by regurgitation. The young are now chirping and also making a noise like a whitethroat scolding. The latter noise they always make after having food. I was out of the observation tent from 3.25 till 3.55 when the female fed the young by regurgitation. 3.57 One of the birds fed, and was gone before I could get the glasses up. 4.20 The male fed young very quickly, and again at 4.35. Neither bird had returned at 4.40 when I left.

27th June. The birds had flown, and the neighbourhood seemed curiously empty and silent after their departure; noisy as they are, they are cheerful little birds, and most amusing to watch. (W.P.C. and E.H.C.).

Dryobates minor (Lesser Spotted Woodpecker).

19th February, 1915. One seen at Sandbanks Road, Poole. (W.P.C.).

5th April. One had commenced a nesting hole in a rotten beech at Canford.

1st May. Dr. Penrose's chauffeur Hanson watched this bird at work on this hole during the afternoon.

22nd May. We again watched the hole in the hope of seeing the bird, but did not do so, and we found subsequently that the hole was abandoned.

13th June. W.P.C. spent some considerable time watching this hole, but as no bird appeared he concluded that the close proximity of some filthy starlings had been too much for the little bird. (W.P.C. and E.H.C.).

Picus viridis (The Green Woodpecker).

15th May. One of the holes (nest A) started by *D.m. anglicus* has been taken over by this bird.

10th June. Nest A was given attention on this date by E.H.C. He notes as follows :—

“Soon after I got up the tent, one of the birds went in, the hen I think, but she did not stay long.

10.0 Both birds were prowling round in the vicinity, sometimes hunting on the ground for food.

10.15 And sometimes on the pines and birches close at hand. Every little while they would call affectionately to one another.

11.21 The female came to the nest. 12 The female returned and was still on the nest at 12.40, so I went out for some lunch. 1.0 I returned, but there was no sign of the birds.

1.30 The male hopped round and the female looked out and exchanged a few notes of conversation with him. He stayed close to the tent flustering around in the dead leaves, together with a blackbird, but it was very easy to distinguish the heavy hops of the *P. viridis* from the lighter footsteps of the blackbird.

1.35 to 2. I amused myself taking the large wood ants which had invaded my tent out of my clothing, and then as the hen seemed either to be sitting or covering very young chicks, and neither bird was fruitful from the observation point of view, I gave up.

13th June. I put up to this pair again, but after great difficulty with my apparatus I found such preposterous exposures would be required under the thick foliage that I gave the idea up. The young had just been hatched, I think, as they set up a faint bee-like humming when I scratched the tree with my finger nails. The female looked out of the nest once or twice and the male came round and gave his “alarm” yaffle. This was the last time I paid attention to this pair of birds.

20th June. This brood had progressed to the stage of making a noise like a swarm of bees. The old birds dug so

far into the tree that they got through the dead wood into the living wood behind, with the result that the birch sap had oozed and is still shewing signs of oozing, so evidently a certain amount of dampness is not detrimental to the young.

3rd July. This nest was empty and the brood had departed.

13th June. I went down to nest B (see under *D. m. anglicus*). The *P. viridis* had at the end of April turned the starlings out lock, stock, and barrel, thrown the nest and young on to the ground, cleaned the cavity up thoroughly, and enlarged it to suit their own requirements. This treatment of the starlings we regarded as indicating a very proper sense of decency and a just wrath on the part of the *P. viridis*. They were the only pair of starlings that defiled a very beautiful birch copse, which, excluding a few blackbirds, is usually tenanted only by the aristocracy of our bird world. One bird only came to the tree containing the nest, but I was unable to see which, as it pitched in the tree and did not come to the nesting hole : it stayed in the vicinity from 2 to 4.30. I was unable to determine if it was the male hanging round whilst the female sat inside.

20th June. E.H.C. commenced on this nest ; from 2 to 3 one of the birds was calling in the distance and once another answered. The young made a little noise between the buzzing of bees and a grating sound.

3.30 W.P.C. took on for a short time. 3.35 One of the birds passed close to the tent and called "quock quock quock." 3.45 One of the adults spoke in the distance. E.H.C. came back and took on. 4.30 Female came to a tree near at hand and called and moved to and fro at intervals.

4.35 She came to the nesting tree and spent 5 minutes examining the tent, and then backed down the tree to within a few feet of the ground. 4.45 She prowled about on the ground looking for food. 5.15 I gave it up.

25th June. E.H.C. again visited this nest and noted as follows :—

3 p.m. The young were making a rasping noise not unlike a file being rubbed slowly along the edge of a good sized piece

of stiff paper ; the noise is rather deep. The male was calling in the distance, and then came into a tree close at hand and called at intervals, the young answering with a rasping hum.

4 p.m. Male came to nest ; the young must still have been very immature, as he went inside. The male did not actually announce his arrival on the nesting tree, and had I not heard his wings and the noise he made pitching and clambering down the tree backwards he might have come unnoticed.

27th June. E.H.C. went over to the nest, hoping to get some colour photographs, and noted as follows :—

3.25 The light became very dull whilst I was setting up, as thunder was rolling about everywhere. The male called at intervals while I was setting up.

3.35 to 3.55 He called at intervals of about 5 minutes from one of the dead branches of the nesting tree. 3.55 He moved to another tree. 4.5 He came to the nest and after some hesitation entered. The female was close at hand and called whilst the male was in the nest. The young now make their rasping buzz loudly. 4.10 The female came and sat up near and remained in the neighbourhood, calling occasionally. 5 The female came to the nest, fed some of the young at the entrance, finally entered the nest and cleaned it. Thereafter I left.

3rd July. W.P.C. thought he would try his luck on this nest with Lumiere Autochrome and Paget Colour plates. He notes as follows :—

3.30 I got started ; the female bird arrived shortly after. She came to the hole, but was very fidgetty indeed and gave me no chance of trying a plate on her. She started to feed the young and then got a fit of nerves, and went on to a high bough, whence she called repeatedly for the male. She waited about half an hour, during which time I debated whether I would swing the camera round to try a shot at her, but she never stayed still a fraction of a second, twisting her head in all directions, and every once now and again calling. Her head action and movements remind me very much of the Great Northern Diver (*Colymbus immer*).

4 p.m. The male arrived and the female left. The male was fairly bold till I fired an Autochrome at him, when the noise of plate changing sent him up aloft to consider matters. In five minutes he was back. I gave him 4 seconds on an Autochrome and the result is passable. I induced him to stay still for this period of time by whistling short sharp blasts at him. After that he went to the nest, and I tried 4 Paget Colour plates at him with exposures of 1 second, but he moved in two out of four, and the plates have failed to record his colour with the accuracy of the Lumiere plate. He afterwards fed the young by regurgitation. He was fairly leisurely over it, but seemed to have an immense supply of food. I noticed that when he considered any individual chick had had a fair share he refused to give it any more, and drew back each time the chick tried to reach him, until place was given for a fresh one. The green of both birds, but especially that of the female, is so faded that the Brown Woodpecker would be a more accurate name than green. The crest of red, however, seems to retain its colour well. One young one is very advanced and has a very handsome red crest, but the others (I was only able to distinguish three) are more backward. (Two of the large species of *Tabanus* played havoc with my ankles whilst I was watching the birds and militated against my success, as they made my ankles bleed to such an extent that I could not refrain from movement once or twice.)

5 p.m. E.H.C. took on and waited till 6, but neither parent came. He noted that the young had grown a great deal in a week and still made a noise like rubbing a file on the leaves of a book. In addition to this noise they made a loud, high-pitched croak.

4th July. E.H.C. had a try at this bird again, as we were very anxious if possible to secure a good colour photograph, as none of the plates in books that we have seen give the colour accurately, or give a really good idea of the characteristic poses of the bird. E.H.C. got set up at 2 p.m. in a good light, and notes as follows :—

2.15 The male came to the nest and fed one young one only three times by regurgitation. When he had finished I whistled to him to try to detain him, but he only peered about, and fidgetted, and then went up the tree, where he stayed awhile and left. I heard nothing more of the birds until 3.40, when one of them spoke up to the right about 100 yards away. At 4.10 the female which had been wandering round came to the tree, but never went into the nest; after climbing about for two or three minutes she settled down on one of the high boughs. I managed to shift the camera up, get it round and alter the elevation and take some photographs of her, but they are not very satisfactory.

7th July. These young were still in the nest, but 10th July they had gone.

Picus viridis is quite the most suspicious bird we have observed at close quarters, and the female is highly nervous, not having a tithe of the pluck of the male, who for all his suspicion and caution is in some respects a bold bird. The way he seemed to divine one's presence in the tent was extraordinary. On at least two occasions (curiously enough, although we were surprised and discussed the matter with each other, neither made a written note of it) the male came into the tent to investigate matters. As the tent is only a matter of 10 feet high at its maximum and the material forming the sides 11 feet high in order to get level with the nest, it was raised by additional large bamboos driven into the ground a further 5 feet, the camera being worked by standing on the top of a high pair of steps inside the tent; it will therefore be observed that from the foot of the material to the ground there was an open space of 4 feet, and we banked this in on the front and sides with birch growth, bracken, and the like, leaving the back open as an easy means of ingress and egress. The male used to come to the back of the tent on the ground and walk in, and look up round to see if anyone was inside. He did it twice when E.H.C. was in the tent and once when W.P.C. was in it, and both of us feel sure he communicated the fact to the hen in some way. (W.P.C. and E.H.C.).

Iynx torquilla (The Wryneck).

22nd April. Two heard at Broadstone. (W.P.C.)

Cuculus canorus (The Cuckoo).

Arrivals.

18th April. One only at Canford.

20th April. One only at Broadstone.

24th April. One only at Broadstone.

9th May. Numerous at Canford.

24th May. Two heard at Canford. The departure was not noted. W.P.C. considered this bird scarce, but E.H.C. says the numbers are normal. As W.P.C. cannot hear the bird call, he is likely to form an incorrect conclusion. (W.P.C. and E.H.C.)

Micropus apus (The Swift).

Upward migration. 2nd May. 8 or 10, over Poole, first thing in the morning. 3rd May. There was a decided increase at Poole.

Downward migration. 15th July. Very few round the houses, but a large body hawking over the lake in the Park at Poole, evidently beginning to flock.

Caprimulgus europaeus (The Nightjar).

7th July. We saw a pair of these birds in Canford Bottom.

11th July. We spent one hour and a half in searching for the nest of this pair (A) and found it with two eggs of the spotted type.

A further pair with two eggs was also found a short distance away (B). These eggs were of the heavily blotched type.

13th July. We were walking across to nest (A), and both of us spotted a third bird (C) sitting. We tried to snapshot her, but she got up, disclosing the fact that she was sitting on a single egg of the marbled type.

Nest A.

18th July. E.H.C. took this bird in hand.

He got set up to the nest by about 8 a.m. and noted as follows :—A few minutes later the hen arrived and sat down about 10 feet on my left and stayed there with her eyes some-

CAPRIMULCUS EUROPAEUS *Lin.*
THE NIGHTJAR OR GOATSUCKER



♀ sitting on nest,

times quite shut and sometimes just to say open. After three-quarters of an hour she moved towards the nest with a sinuous mode of walking that seemed more like a glide than a walk. When she first arrived she made a curious noise like a little growl, but afterwards made no sound. About 8.50 the bird reached the nest and sat down between the camera and the nest, where she appeared to have gone fast asleep. A few minutes later she went on to the nest and covered the eggs, first turning them. I stayed in the tent till 11 o'clock, when, as there was nothing more to be seen than that the bird was still fast asleep, I slipped out without disturbing her.

25th July. I again visited this nest with the intention of trying to photograph the bird leaving the nest. I was successful in snapshotting her as she flew away, but 1-225th of a second is not quick enough exposure to ensure absence of movement. W.P.C. afterwards spent 4 hours in the tent in a frightfully hot sunshine, but the female did not return to the nest; she had gone to sleep with the male bird under a fir tree close at hand.

9th August. These young were fully feathered and about half grown, laid down side by side about four feet from the tent, and the same distance from the nest, which shewed the remains of the egg shells. The female, which rose from the young birds, only flew a short distance with feeble flight and sank into the long grass. Both the young kept quite still until W.P.C. touched one with his finger, when it became very fierce and spread its wings, and opened its mouth very wide and made a hard breathing sound.

Nest B.

18th July. W.P.C. took this nest in hand at 9 a.m., and it then had two downy youngsters about 2 to 3 days old. The young were in the long grass within a few inches of the nest, which still contained the broken egg shells. Up to one o'clock the female had not returned, so W.P.C. came out for lunch; whilst he was away the female returned, so we tried to get her as she rose, but had no luck. W.P.C. then

stayed in the tent till 4.45, up to which time she had not returned, so he gave up.

25th July. The young had travelled some distance from the nest and were hiding in the braeken, where E.H.C. found them through the female jumping and retiring to a fir tree not far off, where she was mobbed for about 10 minutes by chaffinches, blue tits, and coaltits. E.H.C. tried to stalk her with a 16in. lens, but she refused to allow him to come near enough to get a satisfactory picture. So he returned and captured the young birds in order to photograph them; they resented interference, made themselves look as fierce as possible and made a noise something like that of a kitten swearing, but hardly as loud. The females, quitting young, fly very weakly with wings down and tail depressed, often pitching within 20 yards with wings spread on the ground; on following, the females behave not unlike a plover seeking to entice strangers from the proximity of the nest.

Nest C.

18th July. This bird had hatched one young one, which we noted grew very rapidly, presumably by reason of its having a monopoly of the entire food supply brought by the parents.

9th August. This young one was 2-3rds grown and was able to fly 100 yards. It was still in the nest, but quitted immediately we approached, having been roused by the hen which was still attending it, and who flew off and then stood about 200 yards away watching us. An examination of the insect remains in the nest revealed a large number of moth remains, but we were only able certainly to identify *Agrotis pronuba*, *Agrotis comes*, *Agrotis tritici*, *Feltia exclamatoris*, *Xylophasia polyodon*. The large noctuæ were apparently sucked dry through a hole in the posterior end of the abdomen, the smaller ones were only evidenced by wings in such a battered condition that identification was impossible.

Carine noctua (The Little Owl).

Mr. S. H. Wallis, of Chesterfield Place, Weymouth, writes (under date 4th February, 1916), "You know how the Little

Owl is spreading. Three pairs have been killed under my notice recently. These owls are destroying the nightingales, and probably other night warblers." I corresponded with Mr. S. H. Wallis on the subject of this bird, because it is not a common bird, and I felt, too, some diffidence about accepting the statement that a small bird like *Carine noctua* would tackle anything the size of a nightingale. Mr. Wallis was most patient in answering my pertinacious enquiries, and wrote to me under date 17th April, 1916 : " I sent to the Dorchester Museum offering a pair of *Athene noctua* which were shot at Chickereil on Mr. Jesty's (County Councillor's) farm. The Museum people said they had received three already." Again, on the 23rd April Mr. Wallis wrote to me " I can see Mr. Jesty, jun., for data. I heard yesterday that Keeper Hicks (Middleton Estate, Bradford Peverel) shot one eighteen months ago. A man working on the Park farm at Hooke has seen them. They occupied a hole in a stump and frequently pitched on a wall ; he said he could have caught them, they were not a bit shy. Respecting the destruction of nightingales, Howard Saunders in his Manual of British Birds says they destroy thrushes. Nearly every little cover about these parts had nightingales the year before last, but last summer there was scarcely a pair here. My son, who is in practice at Wrexham and keen on observing birds, tells me the little owl is rapidly spreading and destroying the nightingale, and I have been told by the keepers that they were vastly more scarce, some kind of owl probably killed them."

On going into the life history of this little bird, I fear he must be put down as a murderer of all our evening songsters and insectivorous birds, and I hope in the 1916 report, if I am still responsible for these notes, to make some more extended notes. (W.P.C.)

Circus pyargus (The Montagu's Harrier).

8th August.—At Handley Down W.P.C. and E.H.C. both saw on different occasions a hawk which E.H.C. did think was a Honey Bizzard (*Pernis apivorus*) when he first saw it, because it looked so big ; however, it flew up into a tree, and

E.H.C. concluded after examining it that it was a Montagu's Harrier (Bird of the Year). The fact that there was a newly killed, part eaten *Columba palumbus juv* (the Wood Pigeon) on the ground confirmed this. When W.P.C. saw the bird he had a good chance of watching it as it was picking up insects in a ride ; he was quite close to it and felt sure it was a young Montagu's Harrier, so far as one can be sure of a Harrier. (W.P.C. and E.H.C.).

Accipiter nisus (The Sparrowhawk).

May 9th.—Having found a Sparrowhawk's feeding place at Canford we decided to try to photograph the bird, so put up a hiding tent and decorated it very carefully to make it look as much like a rhododendron bush as possible ; this we left there for a week. W.P.C.'s notes were as follows :—

" I had very faint hopes of a shot. I put up the Ross 17in. Telecentric and found the exposure required was about 1-11th of a second. The Telecentric is too heavy for the camera front and required supporting to relieve the strain. I imagine that so long as the birds are singing round there is no sign of a sparrowhawk ; there is a wren singing vigorously. At 9.45 there is dead silence, broken only by an occasional doubtful hiss from a robin. A woodpecker has just called in the distance, but there is no sign of *A. nisus* anywhere close at hand. 10 a.m., an *Accentor modularis* has just squeaked with that wiry whine which they make. At 10.4 a wren was singing vigorously, and a chaffinch too. At 10.30 it seemed very quiet, and I took a look out of each peephole carefully, I caught sight of the sparrowhawk in another tree some distance away. She was a fine old female. She made a meal of a squab blackbird, but took only three minutes over it and was very quiet. What made me look up in her direction was the curious hollow sound of the tearing flesh. She simply tore the squab in fair size pieces and bolted it without ceremony, and then rubbed her bill clean on a rotten branch of an oak. She went as silently as she came. How long she was there I do not know, as after she went the birds started singing again.

I could not bring her on to the plate except at the extreme top, in such a position that the picture would have been quite useless. As the birds are now quite noisy I suppose she must have been in the neighbourhood some little time even if I did not see her. At 11.15 I left the tent."

(Note.—Readers must bear in mind that when in a bird tent it is only possible to have quite small peepholes to see out of, otherwise birds can see in, and freedom of movement is practically absent).

16th May.—W.P.C. had another try to get a photograph, but his hearing is so faulty that he failed, and formed the opinion that it requires a person of very acute hearing to handle the proposition satisfactorily. W.P.C.'s notes were as follows.

10.30 I went into the tent. The light was rather poor and heavy clouds veiled the sun, which peeped through weakly at times. The birds were very quiet this morning, as it was so dull perhaps; but since the sparrowhawks have frequented the copse which formerly had a very full orchestra it now seems strangely silent. At 11.15 I had observed no sign of the hawks, but a cock pheasant was querking, and then a large shadow came over. This was the female, but she only wiped her bill on a rotten bough. I swung the camera round very slowly, but the maximum swing I could get only enabled me to get half the bird with an image about 56mm. high on the plate, and before I could even think out a scheme of getting round further she slipped quietly away as noiselessly as she arrived. One wants a tent with a revolving turret top for the job.

At 11.10 the cock arrived from nowhere in the same mysterious fashion and sat high up in a tree some distance away. I swung the camera back and put the full rise and tilt on, and had got him comfortably on the plate, although the image was somewhat small, and was doing the finishing touches to the focus, when he slipped off.

I came out, and then E.H.C. and I hunted with a butterfly net and an old bird cage for a young blackbird or thrush to

act as a lure, but to-day were unsuccessful in finding one, though the preceding day the whole place had seemed to swarm with them. We did not care to take a nestling which would have been unable to fend for itself if turned loose. After lunch I returned to the tent and waited patiently till 3.30, when the light was hopeless, and then gave the thing up as a bad job. I was really bitterly disappointed, because a few more degrees of swing would have done the trick; but the exigencies of bird photography don't allow freedom of movement, and I think it is probable that it would be exceedingly difficult to arrange an apparatus which would give an effective horizontal swing of more than 90° , though it is possible it could be done with one of the cameras with a fixed front, which only rack backwards, such as the "Arctos." On the whole, I believe that type to be the most suitable for a bird photographer for stand work, though it throws the weight well forward, and therefore requires an exceptionally good tripod, such as a heavy "Ashford."

It might be explained that E.H.C. considered W.P.C.'s greater photographic experience would more than compensate for his inability to hear well. On the result attained W.P.C. thinks otherwise.

Falco aesalon (The Merlin).

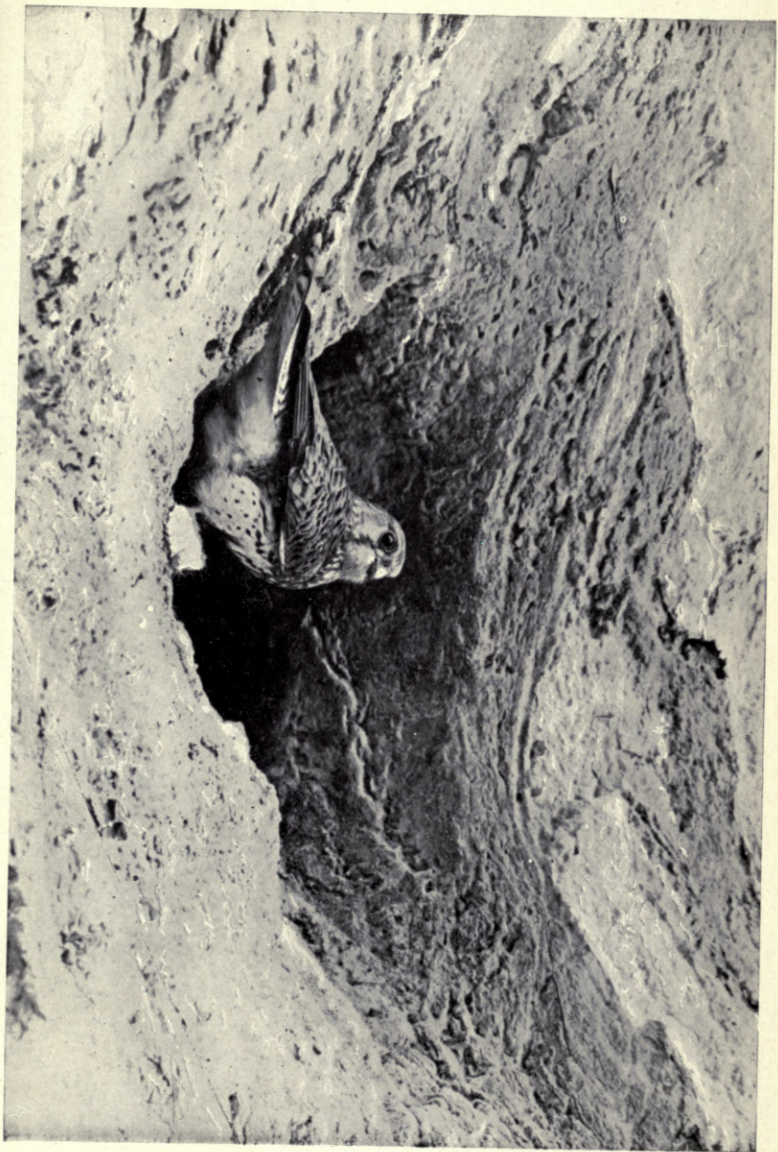
6th June.—One seen on the edge of Poole Harbour, working the gorse bushes for linnets (*Acanthis cannabina*) and afterwards its favourite roosting place was found. (E.H.C.).

Falco tinnunculus (The Kestrel).

30th May.—Having ascertained that a pair we had been acquainted with for many years were feeding young in a sand cliff, within the prohibited area, we repaired to the duly appointed authority and were able to get a permit after satisfying the powers of our bona fides, loyalty, and discretion.

The first job, and a very difficult one, was to excavate and build a sufficient platform for the hiding tent, which we were successful in doing after a fashion a matter of 30 feet up the cliff, but a rather long way below the nest; there was no help for that, as the nest was under an overhanging portion of the

FALCO TINNUNCULUS *Linn.*
THE KESTREL.



♀ at Eyrie, Poole, 1915.

cliff in a hole, and the face immediately below the hole was perpendicular and afforded no foothold, leave alone the possibility of erecting a suitable platform for a tent. The setting and securing the tent and camera was a matter of great difficulty, as one had to bear in mind that a sudden descent of 30 feet backwards into the furze bushes below might be fraught with serious consequences to oneself, and would certainly have meant a heavy bill for camera repairs. W.P.C. took charge and got settled about 10.45 after 1½ hours spent in erecting the tackle.

11.22.—The cock kestrel came and settled down to watch the tent from a small projection of the cliff face. He was decidedly inconspicuous on the brown cliff side, and, like all birds of prey, seemed very suspicious. The young kept fairly quiet.

11.34.—The female came to have a look at things, but was if anything more timid than the male. 200 yards appeared to be the limit as far as she was concerned. After a time she sailed round the back of the tent to inspect it; unfortunately it was not stretched sufficiently tightly, so that it swayed a good deal in the breeze.

11.36.—The male came back and kept watch from a distant part of the cliff; he looked just like a scar on the cliff. After a time he seemed a little less shy, as he preened himself and walked along the cliff face to a shady spot; he scrambled along much like a swallow clinging to a wall.

11.50.—The female joined the male and preened herself; she, however, had some kind of prey in her talons, and was apparently holding to the cliff face by one foot; both birds had shady positions.

11.55.—The male took wing and came across to the tent, apparently to investigate it.

11.57.—The male came to the nest. I was much too excited and full of admiration for his beauty to press the bulb. He is evidently an old bird, and I could only see him when actually at the entrance to the nest, but his barring was exceedingly pronounced and clean cut, and his eyes were very handsome.

A dead or stuffed bird, or even a bird viewed through the glasses, gives little idea of the handsome dignity of appearance that the living bird possesses, and of course can give no idea of the leisurely litheness and extreme grace of movement. The kestrel is a bird usually treated with scant courtesy and looked down upon as compared with his congeners; but no one who has had the living bird within 12 feet of him, and had leisure to examine it critically, can fail to be struck with the fact that he really possesses all the aristocratic beauty usually associated with the Falconidæ. I was very delighted with him, and it was quite a revelation to me what a beautiful bird the kestrel is.

He stayed about one minute and then sailed off.

12.0.—The cock went back to the hen, apparently to reassure her, and sat in the heather at the cliff edge in full view. The hen fell off her perch and then scrambled up to the cock.

12.5.—The hen came to the nest, but was so nervous she barely stayed half a second, certainly not long enough for me to squeeze the bulb, although I was ready. The click of my watchchain as I moved sent her off in a fright.

12.10.—The male came in with a great cloud of sand and I gave him an instantaneous at full speed (E.H.C. said he heard the metallic ping of the shutter closing 300 yards away, like the singing of a rifle bullet). The bird cleared at the noise and went round calling "check, check, check, check." He is much the bolder bird.

12.15.—One of the birds came into the sandpit with either a young bird or else a mouse in its talons (subsequently proved to be *Mus sylvaticus*). What looked like the white fluffy head of a young bird was visible at the entrance (subsequently proved to be a casting).

12.32.—Male came to the nest, but had not the courage to stay. He evidently did not like the big eye of the camera looking at him. Whilst I was writing the note, however, he returned bringing the hinderpart of a Meadow Pipit (*Anthus pratensis*). I got a picture of him which clearly shews the identity of the leg by the hind toe and claw. 12.35.—Hen

came and stood in the entrance of the nest for some time. She was very handsome, very blue grey with a strongly marked cheek band ; after letting her stand some-time I gave a sharp instantaneous exposure. She winced at the sound of the shutter and finally took flight ; but was evidently less nervous.

1.0.—One of the birds, I thought the cock, came to the entrance of the nest, apparently without food. He remained about 5 minutes scrutinizing the tent very minutely ; apparently it was the lens to which he objected, as I felt sure he was unable to see into the tent. E.H.C. took on at 1 o'clock ; he notes as follows :—

2.0.—Neither bird back. Before I came into the tent the male and female soared off in great circles, rising higher and higher, and floating away on the wind, which was N.E., until they were mere specks in the sky, and I lost sight of them.

I think all birds have a slack time from 12.30 until about 3 o'clock. As a rule everything is fairly quiet in the birdy way between those hours.

2.30.—I heard one of the birds saying "Ttchock, tchock, tchock, tchock," but the juveniles did not answer. I could not see the bird anywhere.

2.40.—I heard "tweek, tweek, tweek, tweek," 4 syllables 4 times running at intervals, to which the juveniles replied.

2.45.—No further sign of the bird, but the juveniles kept on with a little call of "cheep, cheep, cheep," like little gentle chickens, but a little harsher, still, not at all in accordance with their role in after life.

2.55.—W.P.C. arrived to see how I was getting on, and the female quitted the nest, so she had evidently slipped in between 2.45 and his arrival.

3.55.—One of the birds came to the nest, but did not settle.

4.0.—The female came and I prepared to give her a quick, quiet time exposure ; but she did not stay many seconds, as the tent wagged and she left, but took up a position on a ledge close at hand.

4.10.—I got my chance, the only one I had ; the female came to the nest and I gave her a second or two to compose herself, and then gave her a quick quiet time. She stayed a few seconds after the shutter had gone and then left ; she brought no food. She floated in like a shadow, and left as quietly as an owl, that was why I did not hear her come in at 2.50.

4.45.—W.P.C. relieved E.H.C. in the tent and noted. During the time E.H.C. was in the tent both birds went off about four miles, and on the second occasion the cock, having returned first, waited for some time for the hen in a bush at the back of the tent. They neither of them seemed to approve of the tent ; partly I think because, by reason of its awkward position, it was not at all well set and swayed about a good deal.

4.55.—I heard one of the birds give a “check, check.”
5.20—One of the birds wheeled across between me and the sun. 5.35.—One of the birds came and alighted in front of the nest for a minute or so. I let it stay, but it bolted again very quickly. 6.—The sun went off the cliff, so I packed up.

6th June. We had a further try at this pair of birds, but it all came to nothing. The weather was dull, the wind was high, we had to work two hours before we could even get the tent set on the ledge, and then had to erect so many guyropes that it looked like a wireless station ; and finally when W.P.C. got settled various police constables, looking for an unauthorised snapshotter, kept everything in the neighbourhood so much on the move that the birds declined to come near, and as the police did not effect a capture till late in the afternoon the day was spoiled and W.P.C. had a 6 hours wait for nothing. (W.P.C. and E.H.C.).

Anser.

About the middle of March several flocks of wild geese passed over Dorchester by night. Migrating northward, they were apparently attracted by the glare from the camp for German prisoners, and circled about screaming and whistling for some time before they struck northward again. (R.D.G.).

Nyroca ferina (The Pochard).

Jan. 3.—Winter company of 25 on Poole Park Lake. Later increased to 50, and on 14 February, to 100.

Nov. 14.—25 to 50 were again occupying the Poole Park lake. (E.H.C.).

Nyroca fuligula. (The Tufted Duck).

Male shot near Dorchester in the beginning of December. (R.D.G.).

Clangula hyemalis Linn. (Longtailed Duck).

29 November, 1915. Geo. Brown, of Poole, shot and brought up to me four specimens of this bird. They were shot in Poole Harbour and are now in my skin collection. No. 370, 371, and 372 are immature males in first winter plumage, whilst No. 373 is an immature female in the same state of plumage. They had been feeding on shrimps. (E.H.C.).

Gallinago gallinago (The Common Snipe).

11th April.—Three nests with 4 eggs each found at Bere-wood. W.P.C. and E.H.C. tried to photograph two of these nests on the 18th April. Oddly enough the two nests selected to work at were ultimately both hatched off, but the one nest which we left severely alone was deserted. The day was warm, but the wind was rather high and very uncertain. W.P.C.'s bird came to the neighbourhood of the nest several times, but did not go on. E.H.C. had trouble with his camera owing to the boggy nature of the ground where he was at work, but ultimately got started at 2 o'clock. 2.15 the bird returned and fed in the rushes close to the nest; she left several times for no apparent reason, but always returned saying "tchick tchick tchick" in a whistling note, repeating it many times without pause. About 3 o'clock she came and sat down in the grass close to the nest, but did not go on. At 3.30 she was disturbed by people passing over the hill, at 3.45 she was back, fed down through the swampy ground, and ran straight on to the nest. E.H.C. gave her ten minutes, exposed a plate, and after 5 minutes tried to change, but the noise entailed in plate-changing frightened her off. She returned very quickly. "A snipe is a bird that can stand

"no movement, and I should think very little noise, but my
 "bird showed no fear of the tent whatever, feeding even close
 "to my feet. The snipe is a very charming bird to watch at
 "close quarters, and she seems to feed almost entirely by
 "feeling, although she uses her eyes to find likely little spots
 "between the growth to thrust her bill into. On the nest she
 "sits very still."

On the 25th April both nests had hatched and the young
 had gone. (W.P.C. and E.H.C.).

Tringa alpina (The Dunlin).

During November there were immense numbers of these
 birds in Poole Harbour, flocks running into 1,000 or more.
 (W.P.C. and E.H.C.).

Calidris arenaria (The Sanderling).

Oct. 3.—Several seen in Poole Harbour by Dr. Penrose.
 (W.P.C.).

Totanus hypoleucus. (The Common Sandpiper).

22nd April.—At Dorchester. (G.R.P.).

14th July.—At Poole. Two on downward migration.
 (W.P.C.).

3rd October.—At Poole. A great number in the Harbour.
 (W.P.C.).

Limosa lapponica (The Bartailed Godwit).

Oct 13th.—Several seen in Poole Harbour by Dr. Penrose.
 (W.P.C.).

Squatarola squatarola (The Grey Plover).

9 seen at Whitley Lake, Poole Harbour. (W.P.C. and E.H.C.).

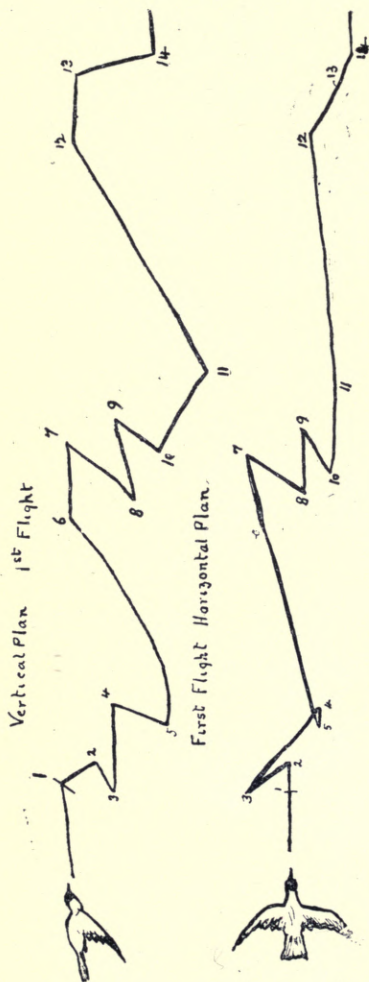
Vanellus vanellus (The Common Plover).

11th April—A nest with 4 eggs at Bere Wood. (W.P.C.).
Haematopus ostralegus (The Oyster Catcher).

Mr. Lloyd reported two seen near Edmondsham in a
 stream, 2 May. Mr. Lloyd knows the bird. (W.P.C.).

Larus ridibundus (The Blackheaded Gull).

6th June.—On Poole Harbour I noticed at 3.45 a bird
 flying in a peculiar manner as if it had suddenly lost its
 balance and sense of direction. It was flying about South to
 North, at 5.30 it returned flying North to South, when it



2nd Flight Horizontal Plan



PLANS OF FLIGHT OF BIRD.

seemed to lose all sense of direction and landed at a point far West of its original line of flight. I think there must have been something the matter with its semicircular canals as the course followed was, so far as I can see, as shown on the annexed drawing. The vertical plan of the second flight was much the same as the vertical plan of the first, but the horizontal plan I cannot recollect in its entirety. I do not remember seeing a bird carry on quite like this, although I have seen them amuse themselves doing fancy flying in fine weather. This was very unusual, or I feel sure I should have noticed it before. (E.H.C.).

Alle alle (The Little Auk).

16th Nov.—An adult male in winter plumage was captured in Poole Harbour by one of the Wills family, who brought it up to me dead. No doubt the little bird was worn out buffetting the recent gales; it was very thin and apparently starved, though the plumage was in good order; the stomach contained nothing but a little seaweed. (E.H.C.).

Colymbus stellatus (The Redthroated Diver).

I watched a Redthroated Diver in Poole Park on 14th February, 1915, through the glasses; he had just a spot or two of red plumage showing on his neck below his chin. I saw him making his toilet; he preened his feathers right down to his belly, this last he did by rolling over in the water and turning on to his back. After completing his belly, he resumed his normal position and washed his back by thrusting his head under water and giving a few strokes forward with his feet throwing the water over his back. Then he would raise himself up flapping his wings and almost getting into an upright position, then launching himself into the water on his chest again. (E.H.C.).

1st March. One seen in Swanage Bay. (W.P.C.).

Crex crex (The Corncrake).

I hardly ever hear one now. (E.S.R.).

Heard at Pulham. (J.R.).

15th August and 22nd August.—One seen on the Swanage Golf Links about the same place every time. (W.P.C.).

Fulica atra (The Coot).

By 14th March, the large winter flock in Poole Park, usually 500 strong, had shrunk to 20.

On Oct. 10th.—They had returned and were 200 strong. (E.H.C.).

Streptopelia turtur (The Turtle Dove).

Common in the valley of Kit Brook. (E.S.R.).

Two pairs at Canford all the season. This bird is very decidedly scarce near Poole. (E.H.C. and W.P.C.).

Perdix perdix (The Common Partridge).

3rd July.—A partridge with 14 tiny mites, seen in a grass field at Canford, struck me as a very late brood.

10th July.—I saw this brood again, and it was still 14 in number, so evidently the mother was fairly careful. (W.P.C.).

REPTILIA.

Rana temporaria (The Frog). Spawn at Pulham, March 10th (J.R.).

Toad spawn at Dorchester, February 25th. (S.E.V.F.).

In a tributary of the Bredy at Swyre I found hundreds of toads spawning on March 15th. The males outnumbered the females, and masses of any number up to a dozen were rolling about in the water. There were certainly several hundred specimens, and a ceaseless croaking could be heard, whilst the stream was black with spawn. (R.D.G.).

Pelias berus (The Viper).

1st March.—1 killed at Dorchester. (S.E.V.F.).

5th March.—1 killed at Maiden Castle. (R.D.G.).

11th April.—2 killed in Bere Wood. (W.P.C. and E.H.C.).

THE APPEARANCES OF THE SCHEDULED INSECTS.

FIRST APPEARANCES OF BIRDS, INSECTS, ETC.

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Name of Insect.	Earliest previously recorded date for Dorset.	Edmondsham. E. F. L.	Poole and District. W. P. C. E. H. C.	Berewood. W. P. C. E. H. C.	Ansty. E. E. W.	Dorchester. J. R.	Dorchester. R. D. G.	Weymouth. N. M. R.
(1) <i>Macdonthia vulgaris</i>	F Apl. 2	May 10	..	..	May 25	..	June 2 (4)	
(2) The Cockchafer	L Mar. 17	..	..	..	Mar. 21			
(3) <i>Lampyrus noctiluca</i>	L Nov. 26		..	..				Mar. 20
(4) The Glow worm	L Jan. 18 (h)	Mar. 4	..	..	Mar. 10 (8)	Feb. 20	Apl. 21	
(5) <i>Apis mellifica</i>	F Dec. 28		..	..		
(6) The Honey Bee	F Jan. 4 (h)	Apl. 30	(3)	..	Apl. 23	May 20	Apl. 21	Apl. 15 (1)
(7) <i>Vespa vulgaris</i>	F female							
(8) The Common Wasp	L Dec. 17	..	[Nov. 14 (7)]	..	..	(3)	Oct. 10 (5)	
(9) <i>Pieris rapae</i>	F Feb. 26	..	Apl. 30	..	Apl. 30	..	Apl. 23	Apl. 16 (2)
(10) The Small White Butterfly	L Oct. 8			..				
(11) <i>Enchloë cardamines</i>	F Mar. 18	May 6	May 8	..	May 25	Apl. 29	May 1	May 21 (3)
(12) The Orange Tip Butterfly	L June 29			..				
(13) <i>Epinephle jurtina</i>	F Apl. 4	..	June 20	..	May 31	..	May 15	May 8
(14) The Meadow Brown	L Apl. 8	..	..	..	..	..	May 20	May 27
(15) <i>Pavarge megæra</i>	F Apl. 8	..	..	..	..	..	May 1 (h)	
(16) The Wall Butterfly	L { Feb. 11 (h) { July 13 fr.	Ap. 3 (h)	Apl. 16 (h)	..	Mar. 13 (h)	Mar. 13 (h)		
(17) <i>Gonepteryx rhamni</i>	F Dec. 27							
(18) The Brimstone	L { Feb. 11 (h) { July 13 fr.	May 5 (h)	Mar. 1 (h)	Apl. 18 (h)	Mar. 21 (h)	(3)	Apl. 28 (h)	Apl. 26 (h)
(19) <i>Vanessa io</i>	F Sept. 22							
(20) The Peacock ..	L { Mar. 3 (h) { Sept. 22	..	Mar. 21 (h)	..	Mar. 28 (h)	(3)	June 20 (fr)	May 21 (h)
(21) <i>Pyrameis atalanta</i>	F { Mar. 3 (h) { Sept. 22	..	June 8 (fr)	..	..	..	June 20 (fr)	May 21 (h)
(22) The Red Admiral	L Nov. 15	..	Oct. 11	..	..	..	(4)	July 23
(23) <i>Pyrameis cardui</i>	F { Feb. 27 (h) { July 5 (fr.)	..	..	..	..	..
(24) The Painted Lady	L Nov. 4	..	..	..	..	..	June 9	
(25) <i>Tyria jacobææ</i>	F May 11	..	..	..	..	..	June 5	July 18
(26) The Cinnabar	L July 24	..	..	..	..	..
(27) <i>Abraxas grossulariata</i>	F June 1	..	..	..	..	..
(28) The Currant Moth	L June 1	..	..	..	..	..

(h) hibernated. (fr) fresh. Other terms and arrangement as in the Bird Schedule.

(1) Both queens and workers very common. (2) *Pieris brassicae* also seen. (3) Very common. (4) Scarce. *Phicostrogus solstitialis* abundant. (5) Rather scarce in comparison with former years. (6) Plentiful. (7) [At Ventnor.] (8) Visiting flowers. (9) Whilst I think Mr. Richardson's record is of a hibernated insect, I think Mr. Good's refers to a fresh Continental immigrant.

INSECTS (NOTES BY W.P.C.)

As a result of my illness I was nearly debarred from field work during the first six months, as I was unable to stand about or walk far.

During the latter part of February and early March I found several empty cocoons of *Dicranura bifida* at Swanage, and I am sure this insect is commoner in the county than is supposed. The majority of the cocoons have evidently been torn open by birds.

The early spring was dull and cold, but *Tephrosia bistorta* turned up on the 21st March and *Hybernica leucophaeria* on the 27th.

The 2nd April was a trifle better, and *Panolis piniperda* was found on a fir tree, whilst a solitary *Vanessa io* disported itself during a sunny interval, but as a whole the month was dull and sunless.

29th April was, however, beautiful, and I saw *Cyaniris argiolus* at Bournemouth, and on the 30th *Pieris rapae* at Poole.

2nd May.—On Pentridge Down I saw numbers of *Gonepteryx rhamni*, *Pieris brassicae*, *P. rapae*, *Vanessa io*, and *Aglais urticae*.

The hot first week in May produced marked progress, bringing out *Euchloe cardamines*, *Cyaniris argiolus*, and *Boarmia cinctaria* in good numbers on the 9th.

On the 10th May *Nisiondes tages*, *Syrictthus alveolus*, and *Argynnis euphrosyne* put in an appearance at Canford.

May on the whole was lovely weather.

On June 5th *Lycaena icarus* and *L. adonis* were out at Badbury Rings.

On June 8th I saw *Pyrameis cardui*, and on June 9 *Pyrameis atalanta*, and as the winds had recently been southerly and south-westerly I concluded there had been an immigration.

The first week in June was dull but oppressively hot, and on June 13th *Callophrys rubi* was about in good numbers and *Diacrisia sannio* was out, but worn.

19th June.—At Badbury Rings *P. atalanta* and *P. cardui* were much in evidence, the latter being a conspicuous feature, which confirmed my surmise of the 8th.

27th June.—I captured one *H. ianira* with pale borders to the wings, and saw several others amongst the crowd that were to be seen at Broadstone Golf Links, but had not the wherewithal to catch them.

4th July.—At Canford very late in the afternoon I saw *Macroglossa stellatarum* flying at Bramble. It was a very hot day and *Argynnis adippe* was out, and the larvæ of *Hemaris fuciformis* were about a quarter of an inch long.

On the 8th July I have a note on the marked tendency of *H. ianira* to bleach this year.

On the 4th August I procured a single *Nudaria mundana* in the Queen's Road at Swanage, and noted the great abundance of *Macroglossa stellatarum*.

On the 22nd August the second broods of *L. astrarche* and *L. adonis* were on the wing at Swanage.

On the 26th September at 4.30 o'clock in the afternoon *Luperina cespitis* was busy ova depositing on Handley Down.

On Oct. 11th I saw *Pyramei atalanta* in Poole Park, and this was the last time I saw any signs of lepidoptera.

Any night work was deemed to be injudicious and likely to cause trouble, having regard to the Defence of the Realm Regulations. (W.P.C.).

Cyaniris Argiolus, the Holly Blue, swarmed in May. (N.M.R.).

FLOWERS.

Neottia nidus-avis.—The Bird's nest Orchis.

Linton's *Flora of Bournemouth* gives two stations, one on the chalk and the other on the Wealden Clay, whilst Mansel-Pleydell's *Flora of Dorset* gives quite a number of stations, as far as I can see almost exclusively on the Cretaceous and Oolitic Systems of Rocks. I have already noted a station under beech trees on Creech Hill, on the Chalk, and besides

have seen at least 30 in bloom at once under beech trees in Lord Shaftesbury's park at St. Giles, which is on the Upper Chalk. To this I should like to add what is, I believe, an entirely new station at Canford on a piece of land marked Bagshot on the Geological Survey, but which is, I think, really London Clay, as the soil and vegetation is most unlike Bagshot, so are the insects, *e.g.*, *Noctua stigmatica*.

The plant is there growing in a rich humus of spruce needles, oakleaves, and hazel leaves, and is not excessively rare. (W.P.C.).

Spiranthes autumnalis (Lady's Tresses).—Mr. A. E. Moule writes recording this plant on 22nd August, 1915, at Church Hill, Little Bredy. (This record, it will be noted, is on the Cretaceous Beds; the vast majority of localities given by the late Mr. J. C. Mansel-Pleydell were on soils where carbonate of lime predominates, and I have never seen it, though I keep a sharp look out for it, on any soil except a soil overlying a carbonate of lime rock or a clay admittedly belonging to one of the series of chalk or limestone rocks). (W.P.C.).

GENERAL NOTES.

Mr. E. S. Rodd, of Chardstock House, writes :—

Jan. and Feb. very wet, little frost or snow. March, dry generally from the middle to end of month. Dry and fine in April, N.E. winds prevailing. Very late spring, the Dawn Choruses feeble and weak on cold mornings at 4 a.m.

May beautiful. All crops looking well during May and June.

A wet July and August, and much hay spoiled. Fine corn harvest from about August 20th. Very little fine, hot weather this summer. November, a sharp frost for a few days, and a wet December.

The year 1915 closed in very wet, stormy, mild weather the last week.

The Rev. J. Ridley, of Pulham, writes :—

Two very slight falls of snow only, and a very little thunder.

15° of frost on November 27th.

From May 20th to June 27th. No rain, and but one very slight shower. Average barometer for the year, 29.52. Highest 33.2 on November 11th, the highest I have ever registered. Lowest, Nov. 13th, 28.33.

A beautiful meteor, followed by a second, on July 5th about 8.30 just after sunset, whilst there was a thin veil of cloud. It was of a most beautiful peacock blue, and travelled from West to East; it seemed to break into light at the zenith and was visible through 30 degrees. I never saw a finer.

E.H. Curtis noted as follows on 18th April at Bere Wood.

"There were three little whirlwinds, one was about 100 yards across and carried leaves up into the air to the height of 250 feet. They followed one another at intervals of about half an hour and were quite moderately violent, the last being nearly sufficient to carry away my bird tent had I not held on to it. They travelled from S.W. to N.E."

THE SCHEDULED PLANTS.

Name of Plant. 10th edition of the London Catalogue.	Previous earliest recorded date for Dorset. (1)	Edmond- sham. E. F. L.	Wimborne, J. M. J. F.	Canford, W. P. C. E. H. C.	Berewood, W. P. C. E. H. C.	Ansty, E. E. W.	Dor- chester. R. D. G.	Dor- chester. J. R.	Wey- mouth. N. M. R.	Chard, E. S. R.
(1) <i>Anemone nemorosa</i> L	Feb. 6	Mar. 18	Mar. 24	Mar. 18	Apr. 11	Mar. 26	*Feb. 1 Apr. 7	..	Apr. 1	Mar. 30
(2) <i>Ranunculus Ficaria</i> L	Feb. 15	..	..	..	..	..	Jan. 1	..	..	..
(3) <i>Lesser Celandine</i> L	Jan. 1	Feb. 20	Jan. 18	..	Feb. 24 (4)	Jan. 12	Feb. 15	Feb. 13	Feb. 18	Mar.
(3) <i>Caltha palustris</i> L	Jan. 20	..	..	..	..	..	Feb. 1	..	Apr. 17	Apr.
(4) <i>Narsil Marigold</i> F	Feb. 2	Mar. 28 (2)	Mar. 18	Apr. 9 (6)	..	Mar. 31	*May 10	..	..	..
(4) <i>Cardamine pratensis</i> L	..	..	..	..	..	..	*Feb. 1	Apr. 26	May 8	..
(4) <i>Meadow Lady's</i> L	Feb. 8	Apr. 9	Apr. 16	Apr. 4	..	Apr. 12	Apr. 10	..	..	..
(5) <i>Smock</i>	..	..	..	..	..	..	*Feb. 10 Apr. 26	..	May 2	..
(5) <i>Sisymbrium Alliaria</i> L	Jan. 13	Apr. 19	Apr. 15	..	..	Apr. 21	Jan. 1	..	..	..
(6) <i>Garlic Hedge-</i> L	Jan. 1	..	..	..	..	..	Apr. 1	..	..	..
(6) <i>Mustard</i>	Jan. 1	Mar. 28	..	..	Apr. 11 (7)	Mar. 1	Apr. 1	Apr. 10 (S.E.V.F.)	Mar. 20	Apr.
(6) <i>Viola</i> L	..	..	..	..	..	..	..	..	..	..
(7) <i>reichenbachiana</i> L	Jan. 1	..	..	..	..	..	*Jan. 1	..	..	..
(7) <i>Gerard's Dog Violet</i> L	Jan. 1	Apr. 15	Apr. 7	June 13 (8)	Apr. 11	Apr. 11	Apr. 20	..	Mar. 20	..
(7) <i>Stellaria Holostea</i> L	..	..	..	..	..	..	May 25	..	..	..
(8) <i>Greater Stitchwort</i> F	Jan. 26	..	..	..	..	..	Jan. 1	..	May 8	May 3
(8) <i>Geranium</i> L	May 15	..	..	..	..	..	Jan. 1	..	..	..
(8) <i>Robertianum</i> L	Jan. 1	May 2	May 6	..	..	May 2	Jan. 1	..	..	..
(8) <i>Herb Robert</i> F	May 23	..	..	..	..	..	..	..	..	..
(9) <i>Æsculus</i> L	Mar. 2	..	May 6	..	..	..	..	..	May 4	Apr. 20
(9) <i>Hippocastanum</i> L	Apr. 6	May 5	May 6	May 10 (5)	..	Apr. 4 May 8	Apr. 1 Apr. 30	May 6	..	..
(10) <i>Horse Chestnut</i> F	..	..	..	..	..	..	*Sept. 25	..	..	..
(10) <i>Vicia sepium</i> L	..	..	..	..	..	..	*Feb. 1	..	..	..
(10) <i>Bush Vetch</i> L	Mar. 4	Apr. 17	Apr. 19	..	..	Apr. 30	May 1	..	May 9	..
(11) <i>Prunus spinosa</i> L	Feb. 10	..	..	..	..	..	..	..	..	..
(11) <i>Blackthorn</i> L	May 4	..	..	..	..	..	..	..	..	..
(12) <i>Rosa canina</i> L	Jan. 11	Apr. 14	Apr. 15	..	Apr. 11	Jan. 18 Mar. 14	Mar. 4 Apr. 1	Apr. 25	Mar. 4	Apr. 22
(12) <i>Dog Rose</i> L	Jan. 22	..	..	..	..	..	Aug. 20(9)	..	..	..
(13) <i>Crataegus</i> L	May 18	May 30	June 1	June 13	..	June 6	June 10	..	June 14	..
(13) <i>Oxyacantha</i> L	Feb. 20	..	..	..	..	..	*Aug. 1	..	..	..
(14) <i>Whitehorn</i> F	Apr. 15	May 8	May 6	Mar. 27 (5) May 18 (5)	..	Mar. 12 May 12	Apr. 10 Apr. 30	Mar. 12 May 14	..	..
(14) <i>Hedera Helix</i> F	Oct. 3	..	..	..	..	..	Aug. 10(9)	..	..	..
(14) <i>Ivy</i> L	Perennial	Aug. 24 (3)	..	..	..	Sept. 16	Jan. 1 (10)	..	..	..
(15) <i>Cornus sanguinea</i> L	Jan. 12	..	..	..	..	..	..	..	..	..
(16) <i>Dogwood</i> L	May 2	June 5	June 1	..	..	..	Apr. 10	..	June 14	..
(16) <i>Sambucus nigra</i> L	Jan. 1	..	..	..	..	June 8 Jan. 13	Apr. 26	..	..	..
(16) <i>The Elder</i> L	Mar. 1	May 16	May 13	June 13	..	May 25	Mar. 1	Feb. 27	May 2	..
(17) <i>Dipsacus sylvestris</i> L	Jan. 27	..	..	..	..	..	Apr. 30	Mar. 26	..	..



Notes on Some Dorset Land Shells.

By E. W. SWANTON.



THE following notes chiefly concern a series of shells, now in the Haslemere Museum, collected by myself within recent years in the Stowers district. They may stimulate further investigation of the molluscan fauna of the county. Some very rare and interesting forms have been taken of the white lipped banded hedge snail, *Helix hortensis*, which is remarkably abundant in that neighbourhood. They may be classified under 6 headings.

1. *Band mutations.*

The method devised by Herr von Martens for recording the mutations is to designate the normal number of bands (5) by numerals, the uppermost band to be reckoned as No. 1, the lowest as No. 5, fused bands are indicated by enclosing in brackets the numerals representing them, missing bands by a cypher. That method is here employed in indicating the following rare and uncommon forms taken at Stour Row. 10345, also from Marnhull; 103 (45) rare both in Britain and on the continent; 0(23)45, hitherto unknown to science;

10305 ; 00345 ; 00340 ; and 00300. (It is of interest to note that of the possible eighty-nine bands variations in this species and its neighbour the dark-lipped hedge snail, *Helix nemoralis*, all the possible mutations of the latter have been recorded, but no less than twenty-eight of those of *H. Hortensis* had not been observed or reported in 1911. Mr. J. W. Taylor's elaborate Monograph of the L. and F. Moll. of the British Isles (vol. III.) should be consulted for full particulars).

2. *Variations in form of shell.*

Var. *trochoidea*, spire elevated. Stour Row.

Var. *depressa*, shell very depressed. One specimen with partially pigmented bands taken at Stour Row.

Var. *minor*, B.F. 10345 ; (12)3(45), and v. *olivacea*, all from Stour Row.

3. *Variations in Colour of shell.*

Var. *alba*, sub-var. *grisea*, Stour Row.

Var. *lutea*. Shell more or less yellow. Stour Row, the series includes some *minor* forms.

Var. *fusca* (= *baudonia*). Shell fawn-coloured, with B.F. 10345, Marnhull and Todber.

Var. *olivacea*. Shell deep olive-brown. Stour Row.

Sub-var. *hepatica*, shell liver-colour. Stour Row, with white and pink-lipped forms.

Sub-var. *de corti*, shell greenish-black. A very rare variety, of which there are at present but two British specimens, both taken from a roadside hedge between Todber and Marnhull. (One is figured in Taylor's Monograph, Brit. L. and F. Moll., Vol. III., pl. xxviii.)

Var. *incarnata*. Shell bright rose colour. Stour Row, the series includes forms with white, rose, and brown peristome and lip ; and the sub-var. *colorata*, shell somewhat fawn colour with brown lip and a yellow area bordering the outside of the rib.

4. *Variations in banding.*

Var. *fasciata*. Shell with coalesced or interrupted bands. B.F. (123)(45), (12345), (123)45, all from the neighbourhood

of Marnhull ; pink-lipped forms with the preceding B.F. also (12) 3 (45) from Stour Row.

5. *Variations in Colour of Banding.*

Var. *fascialba*. This interesting form has been recently described by Mr. J. W. Taylor (see *Monograph* III., 486) from a single example found some years ago near Bristol. It is "characterized by the presence of a white and calcified supra-peripheral zone, upon which the third band of the pentataeniate formula is placed." We have three specimens taken from a hedge at Stour Row (2 adult, one immature), flesh-coloured shells with B.F. 00300.

Var. *rufozonata*, shell yellow with red brown bands. Stour Row.

Var. *arenicola*, shell pale yellow with translucent unpigmented bands, Stour Row ; sub-var. *lurida*, with band partially pigmented, also from Stour Row.

6. *Variations in colour of lip and peristome.*

Var. *roseolabiata*. Aperture pink or rose colour. Stour Row, frequent.

Var. *violaceolabiata*. Shell with purple or lilac lip. We have forms with bright lilac, others with deep purple lip, all taken at Stour Row. It is a very beautiful variety, but the violet tint is fugitive, and after a short time the shells resemble either var. *roseolabiata* or var. *fuscolabiata*, according to the intensity of the original coloration.

Var. *fuscolabris*. Aperture brown, Stour Row, including var. *incarnata* with violaceous peristome (=sub-var. *sauveuri*), a beautiful form which is also represented in the Museum collection by specimens collected by Mr. C. P. Hurst at Great Bedwyn, Wilts.

Var. *nigrolabiata*. Shell with black lip. A single specimen from Stour Row. Apparently dark violet-lipped forms are only one stage removed from this variety. It is a very rare form ; hitherto only recorded from Ratham, near Chichester.

Var. *bimarginata*. Shell with coloured outer lip, bordered internally by a white rib. Stour Row. This is another

extremely rare variety, there being only two records in Taylor's Monograph.

Passing on to the other species in the collection, there are two specimens of *H. nemoralis*, var. *fascialba* (*rubella* 00300), taken by Mrs. Swanton in Duncliff Wood. This interesting form has also been observed in Somerset.

A series of *Helicigona arbustorum*, a frequent species in hedges about Todber and Marnhull. The following varieties are included :—*fuscescens*, shell lacking the supra-peripheral band ; *alpicola*, smaller than type, spire more raised ; *luctuosa*, sub-var. *nigrescens*, shell thick, black all over. One specimen from the neighbourhood of Marnhull. This very interesting form, hitherto unknown in Britain, is described in my "Pocket Guide"* (p. 45) as var. *picea*, which differs, however, in being very thin. The following varieties of the ubiquitous *Helix aspersa* have been found in the Stowers district : *flammea*, shell with pale flame-shaped markings and blotches of dark areas, *fasciata*, s.v. *albofasciata*, with a white band at the periphery, s.v. *puncticulata*, reddish, spotted with yellow, and having a narrow yellow peripheral band ; also specimens approaching the var. *clathrata*, in which the dark ground colour is broken up into squares and oblongs by pale transverse yellowish lines. The collection also includes shells of *H. aspersa* broken by thrushes and by field mice ; in those attacked by mice the spire has been neatly removed, they were found in mouse "runs" amongst long grass.

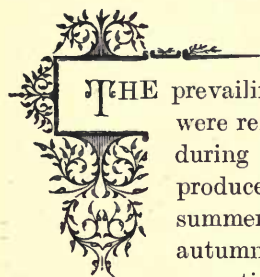
Hyalinia cellaria, *Pyramidula rotundata* var. *scalaris*, *Hygromia rufescens* var. *albocincta*, and *Helicigona lapicida*, all from Stour Provost, and the rare *Vertigo minutissima* taken by Dr. H. Brooksbank at Weymouth.

* I shall be pleased to send a copy of the "Pocket Guide to the British non-marine Mollusca" to any conchologist who may feel inclined to apply for it. The postage, fourpence, must be prepaid by the applicant. It contains descriptions of all the chief varieties, of the fossil species which occur in Post Pliocene deposits other than the Forest Bed series, and of introduced species.



Returns of Rainfall in Dorset in 1915.

By the Rev. H. H. TILNEY BASSETT, R.D.



THE prevailing meteorological conditions of 1915 were remarkably similar to those that prevailed during 1914. The summers of both years produced no very high temperature, and summer conditions continued late into the autumn of each year; both winters were exceptionally mild. Abnormal rainfalls were registered in December of both years. Slow moving storm areas constantly moving inland from our W. and N.W. coasts, invariably associated with secondary systems, were characteristic of both autumns and winters; these secondary systems were chiefly responsible for the heavy rainfalls over the W. and S. of England.

A feature, however, to be noticed, peculiar to 1915, is the great number of days in which an inch and more of rain was registered in the 24 hours throughout the county.

On July the 3rd, between 2 and 3 p.m., a remarkable storm of hail (the hail stones of which were of abnormal size),

visited parts of Somersetshire, much damage being done to property. Weston-super-Mare and the neighbourhood seem to have been the centre of the disturbance. It appears to have passed over Bristol and Clifton, and finally dispersed over Gloucestershire.

The longest spells of rainless weather were from May 20 to June 24, Aug. 18 to 30, and Nov. 14 to 28.

The average rainfall for the year calculated from the 16 stations marked with an asterisk in the tables is 40.870 inches; the average for 60 years 1856 to 1915 is 34.119 inches, showing 6.751 inches above the average.

The wettest day throughout the county generally occurred on Oct. 24, the greatest fall being registered on that day at 17 stations. 10 observers record the greatest fall on Oct. 23, 6 on Dec. 14, 4 on July 16, 4 on Oct. 31, and 2 on Feb. 16.

The greatest fall in the 24 hours was registered at Chardstock Vicarage, 2.96 inches, Oct. 23.

Days with one or more inches. The exceptional number of days in which an inch and over of rain were registered has already been referred to; 4 stations record 10 such days, two stations 9, nine stations 8, ten stations 7, six stations 6. The lowest returns of such days record 2.

The maximum of wet days were recorded at Broadwindsor 198, Chardstock 196, Sherborne Castle 191, and Broadstone 190. The minimum 124 at Fleet House, Chickerell.

OBSERVERS' NOTES.

HAMILTON LODGE, BEAMINSTER.—The average Beaminster rainfall for a period of 42 years = 38.29; the fall of 1915, 6.06 above the average number of rainy days. 178 was relatively small, due to the numerous heavy falls in single days; notably 2.06 on December 14, 1.99 on Oct. 23, and 1.94 on Feb. 16. The fall of 14 Dec. was the heaviest in the 24 hours here since August 28, 1910.

Two extraordinary readings of the Bar. were obtained during 1915—28.40 Feb. 13, and 30.71 Nov. 20.

CHEDDINGTON COURT.—Our average rainfall for 18 years is now 38.96. Heaviest fall for one month 10.21 in December, 1914.

Wet Years	1900	42.33	on	163	days
„	1903	49.02	„	191	„
„	1910	45.27	„	196	„
„	1912	49.46	„	213	„
„	1914	50.75	„	194	„
„	1915	46.80	„	174	„

CHICKERELL, MONTEVIDEO.—Jan. 22 the ground was slightly covered with snow this morning, but it soon melted. Snow fell on Jan. 21 and 22, Feb. 22 and 23, March 27 and 29, and Dec. 12.

March 28, Lieut. Gordon, Royal Scots, Montevideo Camp, Chickerell, saw a very large and bright meteor a few minutes before 8 p.m. going from E. to W.

June 27 and Sept. 21, thunder a long way off.

Rain fell on 25 days in the year in too small a quantity to be recorded. These days are marked with.*

DORCHESTER, WOLLASTON HOUSE.—The rainfall of December is worthy of special mention. The total 11.30 is the highest monthly record during the last 20 years at Dorchester.

I might also draw attention to the fact that although the latest calculation average of annual rainfall for Dorchester is 35.80, the total for 1914 was 45.55, and for 1915 46.24.

GUSSAGE MANOR.—On May 7 the rain registered, 0.73, fell in less than 30 minutes.

BAILIE HOUSE, WIMBORNE.—1915, Jan. 22, Friday, snowed fast from 8 a.m., to 9 a.m.; first snow this winter.

13 May, the 1.03 was made up—0.53 at 5.45 p.m. ; 0.25 at 7.30 p.m. ; 0.25 at 9 a.m.

July 6, Tuesday, fine day ; very fine, large halo round sun at noon ; heavy rain began at 7 p.m. ; strong wind next morning and rainfall, 0.54.

SHAFTESBURY.—Greatest rainfall on one day, 1.43 inches on 23 Oct. Greatest monthly rainfall, 6.42 in December. Least, 0.65 in June.

EAST LULWORTH.—Taking the 10 years period the rainfall for 1915 has only twice been exceeded, 43.06 in 1914, 45.33 in 1912.

Nov. was the coldest and driest in this ten years period.

Dec. the wettest and roughest. The two years in which Dec. rainfall approached this large total were December, 1914, 8.17 inches, and Dec., 1911, 8.32 inches.

There were few hard frosts, severest was Jan. 29 ; the heaviest 24 hours rain was July 16, 1.60 inches ; the heaviest in a brief time Oct. 24, 0.84 inches in four hours.

June, with 0.92 inches, the driest in ten years ; except 1908 with 0.45, which fell on two days.

WINTERBORNE WHITCHURCH.

JANUARY.—The month as a whole was mild. The temperature rising on the 13th to 56.5 in the shade, higher than I have ever observed in January. There were 15 days on which rain fell ; the heaviest fall in the 24 hours was measured on the 6th, 0.75. The lowest temperature was registered the night of the 29th, 21.0. The coldest day was the 29th, when the thermometer did not rise above 34.0 in the 24 hours. Snow fell heavily during the early hours of the 22nd. Total rainfall, 3.81.

FEBRUARY.—A wild stormy month, rain fell on 19 days, the heaviest fall, in 24 hours occurred on the 16th, when 1.37 inches was measured. The highest shade temperature was registered on the 3rd, 50.0, the lowest the night of the 24th, 19.0. The coldest day was the 24th, when highest temperature was 39.0, the warmest night was that of the 4th, when the thermometer did not fall below 45.0. Snow showers were frequent on the 22nd and 23rd. Total rainfall, 6.70.

MARCH.—Dry and cold conditions prevailed throughout the month, the wind blew from N.W., N. or N.E. on 28 days. Rain or snow fell on only 6 days, the heaviest fall in the 24 hours was 0.45 inches on the 22nd. Snow fell on the 8th and 27th, but in small quantities. The highest temperature was registered on the 24th, 57.0 in shade. The lowest, during the night of the 29th, 20.0 ; the coldest day was the 18th, when the temperature did not rise above 42.0 ; the warmest night was that of the 4th, when the thermometer did not fall below 45.0. Total rainfall, 0.55.

APRIL.—Cold conditions prevailed generally till the 26th, from that date to the end of the month the weather was warm. Rain fell on 13 days ; the heaviest fall in 24 hours occurred on the 6th, when 0.60 was measured. The highest temperature was registered on the 28th, 72.0 in shade ; the lowest occurred during the night of the 5th, 26.0. The coldest day was the 14th, when the temperature did not rise above 49.0 ; the warmest night was that of the 3rd, when the thermometer did not fall below 45. Total rainfall, 1.62.

MAY.—There were 10 days on which rain fell, the heaviest fall in the 24 hours occurred on the 13th, when 1.03 was measured. The temperature reached 70 and above on 9 days in the shade ; the highest recorded was 79.0 on the 26th, the lowest 30.0 during the night of the 30th. A slight thunderstorm passed from E. to W. to the N. between 2 and 2.30 on the 7th.

The rainfall from beginning of the year to end of May amounts to 15.39, exactly the same as was measured in the corresponding period of last year.

JUNE.—The long drought which commenced on May the 20th broke up on the 23rd. Rain fell on 8 days, heaviest fall in 24 hours occurred on the 29th, 0.53 inches ; a short thunderstorm passed from W. to E. far to the S. between 12.15 and 12.30 a.m. on the 8th, the lightning was very vivid. Distant thunder was heard frequently from 1.55 p.m. to the W. and N.W. on the 27th. The thermometer reached 70 and above on 14 days, the highest registered was 79.0 on the 8th ; the lowest was recorded the night of the 19th, when the temperature sank to 31.0—the lowest I have ever observed at midsummer.

JULY.—From the 1st to the 6th the weather was warm and summerlike, but from the 6th to the end of the month unsettled and cold conditions prevailed. Rain fell on 14 days, the heaviest fall in 24 hours was registered on the 16th, when 1.37 inches was measured. Slight thunderstorms occurred on the 24th, 27th, and 28th, all of which travelled from W. to E.

Temperature reached 70 and above on only 6 days ; the highest point registered was 79.0

the 4th, the lowest during the night being the 11th, 42.0.

AUGUST.—Rain fell on 12 days. The heaviest fall in the 24 hours occurred on the 2nd, 0.40 inches. Slight thunderstorms passed from N.N.W. to E.S.E. on the 13th and 15th. The temperature rose to 70 and above in the shade on 12 days, the highest was reached on the 26th, 77.0, the lowest occurred during the night of the 29th, 42.0.

SEPTEMBER.—Warm and summerlike throughout. Rain fell on 8 days ; heaviest fall in 24 hours was 0.63 on the 24th. Thunder was heard to the S. from 6 to 8 p.m. on the 21st. Temperature reached 70 and above on 11 days ; the highest record was 77.0 registered on the 18th, the lowest occurred during the night of the 4th, 33.0.

OCTOBER.—The weather was fine and dry generally till the 20th, but from the 21st to the end of the month no less than 5.78 inches of rain fell.

Rain fell on 13 days, the heaviest fall in the 24 hours was measured on the 24th, 1.44 inches ; falls of an inch and over in the 24 hours occurred on no less than three occasions during the month. The highest temperature in the shade was registered on the 11th, 56.0 ; the lowest during the night of the 29th, 28.0. A good deal of lightning was observed during the evening of the 21st.

NOVEMBER.—From the 14th to the 28th the weather was wintry for the time of the year. Rain fell on 7 days ; the heaviest fall in the 24 hours was

measured on the 11th, 1.20 inches. On 9 days the temperature failed to reach 40 in the shade. On 20 nights the temperature fell to the freezing point and below. The highest temperature for the month was registered on the 11th, 55.0, the lowest during the night the 26th, 16.0, a very low temperature for November.

DECEMBER was remarkable for its rainfall and its likeness to December in last year and its number of wet days. Rain fell on 25 days with a total rainfall of 9.01 inches ; the heaviest fall in the 24 hours was registered on the 14th, when 1.30 inches was measured. The highest temperature was recorded on the 9th, 54.0 in shade ; the lowest, 25.0, during the night of the 19th.

There was a heavy hurricane on the 27th, many trees blown down, and there was a remarkable hail storm about 8.45 a.m. on the 31st ; it was of long duration for a hail storm. The ground became covered to the depth of an inch or more with hail stones.

Captain Acland has a valuable note on December's rainfall under Dorchester.

The max. and min. thermometers from which the above records were taken are new corrected instruments placed in a Stevenson Screen $4\frac{1}{2}$ feet above ground (one gross).

TABLE I.—DEPTH OF RAIN IN INCHES, 1915.

Station.	Observer.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
Abbotsbury, New Barn	J. C. P. White	3.27	5.41	0.82	1.01	2.52	0.97	3.76	1.28	1.92	5.88	2.63	8.72	38.19
*Ashmore Rectory	Rev. A. J. Reed	3.94	6.46	1.09	1.74	3.09	1.02	4.44	1.20	1.96	6.62	2.35	7.63	41.54
*Beaminger, Hamilton Lodge	Fiennes Trotman	4.50	7.14	0.91	1.59	2.38	1.27	4.43	1.29	1.73	6.58	2.35	9.35	44.35
Bere Regis, Barrow Hill	A. Lucas	3.37	7.04	0.87	0.99	2.30	1.02	3.99	1.09	2.11	5.47	3.22	10.41	41.88
Blandford Rectory	Rev. R. A. Bond	3.76	6.64	.92	1.43	2.43	.71	5.36	1.94	2.20	6.02	2.72	8.88	43.01
*Bloxworth House	F. G. A. Lane	3.80	7.38	1.05	1.25	2.90	.89	5.17	1.20	2.09	6.23	3.54	10.07	45.51
Bloxworth Rectory	Rev. O. Pickard-Cambridge	3.17	6.71	0.90	1.12	2.44	0.79	4.62	1.61	2.41	6.24	3.54	8.58	42.13
Braford Peverell House	Mrs. Middleton	3.90	7.41	1.01	1.33	2.66	1.05	5.49	1.65	2.41	6.13	4.04	9.81	46.89
*Branksome, Gas Works	T. W. Woodall	4.08	4.34	0.79	1.29	2.72	0.78	3.46	1.14	2.48	6.33	3.53	9.46	40.40
*Bridport, Concygar	Hy. Gorton	3.84	5.12	0.85	1.22	2.49	1.20	4.38	1.57	2.15	6.81	2.66	8.37	40.66
Broadstone	F. W. Beckford	3.66	6.61	.87	1.55	2.84	0.65	4.67	1.20	2.18	6.88	3.65	9.86	44.42
Broadwindsor, Blackdown House	C. E. M. Pinney	3.82	8.41	0.78	1.61	2.63	1.36	5.21	1.85	1.23	8.60	3.66	9.74	49.10
Broadwindsor Vicarage	Mary J. Brown	4.55	7.73	1.00	1.52	2.87	1.39	5.34	1.84	1.76	8.25	3.95	11.14	51.34
Chardstock Rectory	Rev. A. Lewis	4.00	8.20	0.72	1.18	2.15	1.25	6.40	2.30	1.47	7.87	3.00	8.20	46.74
Chedington Court	H. Ricknshaw (for Sir Hy. Peto, Bt.)	3.76	7.40	0.88	1.65	2.94	1.87	5.11	1.95	1.62	6.81	3.38	9.43	46.80
Chickerell, Montevideo	Mrs. N. M. Richardson	3.12	4.68	1.01	0.87	2.48	0.83	3.03	1.21	1.59	5.72	2.44	8.74	35.72
Corfe Mullen, Pool Waterworks	Waterworks Engineer	3.37	6.50	0.79	1.48	2.73	0.73	3.86	1.55	2.48	7.54	3.72	10.29	45.06
Creech Grange	J. W. G. Bond	4.05	5.90	1.40	1.40	3.06	0.73	4.93	1.62	2.34	6.55	3.17	10.42	45.58
Dorchester Waterworks	H. D. Strange	6.18	6.17	1.19	1.14	3.06	0.89	5.81	1.56	2.23	6.06	3.44	11.35	48.81
Dorchester Kingscote	E. Archdall Ffooks	3.44	4.91	1.27	1.07	2.71	0.94	4.29	1.35	2.20	5.55	3.14	9.29	40.13
*Dorchester, Wollaston House	Captain J. E. Acland	3.71	6.56	1.16	1.10	2.50	0.91	5.20	1.60	2.34	5.86	4.00	11.31	46.24
East Stoke, Blunegat Hall	Lieut.-Colonel Farrer	3.39	6.37	0.91	1.24	2.44	0.73	4.01	1.35	1.82	6.19	3.69	10.50	42.74
Fleet House	Mrs. C. E. A. George	2.92	5.10	0.74	0.82	2.43	0.76	3.43	0.64	1.57	4.96	2.21	8.08	34.26
*Gillingham	S. H. Stephens	4.25	5.60	1.12	1.39	2.53	0.93	4.58	2.82	2.02	6.24	2.05	7.08	40.62

TABLE I. (CONTINUED).

Station.	Observer.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
Gussage St. Michael Manor ..	Miss Ellen Good ..	3.67	6.81	0.90	1.60	3.44	0.64	5.03	1.41	2.26	7.02	2.82	8.50	44.10
*Holm Vicarage ..	G. D. Bond ..	3.54	6.09	0.91	1.24	2.47	.68	4.45	1.52	1.95	6.15	3.26	10.07	42.33
*Iwerne Minster ..	Rev. Geo. Wellington ..	3.07	5.43	1.21	1.27	2.68	0.54	5.03	1.92	2.25	6.81	2.79	8.37	41.37
Kinson ..	W. Nash (for Jas. Ismay, Esq.) ..	3.80	7.67	0.81	1.56	2.49	0.59	3.89	2.87	1.41	6.56	2.37	8.03	42.05
Langton Matravers ..	W. Ch. Keevill ..	3.97	6.09	0.92	1.35	3.00	0.83	4.42	0.99	2.76	5.31	3.96	9.59	43.19
Little Bredy Parsonage ..	Rev. J. W. Coulter ..	4.06	5.20	1.31	1.47	3.40	0.75	3.34	1.22	1.76	5.87	3.30	9.72	41.40
*Lulworth, East, Vicarage ..	Rev. A. C. Moule ..	4.33	6.45	1.20	1.00	2.40	0.94	6.16	1.72	2.83	8.89	3.52	9.95	49.45
*Milton Abbas Gardens ..	Rev. W. D. Filliter ..	3.63	5.25	1.21	1.45	2.85	0.92	3.44	1.83	2.31	5.14	3.11	9.33	41.17
Parkstone ..	C. H. Perkins ..	4.17	7.54	0.88	1.71	2.62	1.17	5.31	1.49	2.19	6.72	3.24	10.44	47.48
*Portland, H.M. Naval Depot ..	W. H. Symes ..	3.60	5.85	.83	1.23	2.76	1.09	3.77	1.10	2.41	6.48	3.56	9.27	41.94
	Officer in Charge of Works ..	4.11	5.57	1.03	1.03	2.42	.95	3.14	1.21	1.91	4.58	2.38	9.01	37.34
*Shaftesbury ..	A. Macdonald ..	4.02	4.48	.99	1.33	2.42	.65	3.94	1.24	2.06	5.83	1.84	6.42	36.12
*Sherborne Castle ..	Thos. Turton ..	3.93	5.56	1.00	1.49	2.51	1.43	3.67	2.78	1.76	7.16	2.18	7.13	40.60
Turnworth ..	Col. Parry Okefen ..	3.72	8.15	1.00	1.65	2.86	1.06	4.64	2.29	2.54	7.45	3.53	10.38	49.29
Wareham ..	S. T. Bennett ..	3.61	6.18	.80	1.23	2.53	.61	3.98	1.27	1.88	6.32	5.36	9.75	41.72
Wareham, Trigon ..	Mrs. Leonard Sturdy ..	3.16	6.04	.81	.96	2.35	.60	3.86	1.20	1.82	5.76	3.36	9.93	39.55
*Weymouth ..	Jas. H. Bolam, M.I.E.E. ..	3.01	5.15	.83	.84	2.53	.58	3.44	1.01	1.78	5.24	2.34	8.48	35.33
Wimborne, Ballie House ..	Rev. Jas. Cross ..	3.23	6.20	.81	1.18	2.56	.79	3.94	1.27	2.14	7.09	3.30	8.92	41.43
*Wimborne, Colford House ..	G. H. Batterbury, M.D. ..	3.14	6.28	.80	1.42	2.72	.53	4.50	1.21	2.31	6.59	3.35	8.88	41.73
Winterborne Whitechurch, ..	E. R. Sykes ..		6.66	.92	1.54	1.71	1.36	4.73	1.41	2.15	6.44	3.38	9.91	44.05
Winterborne Whitechurch, ..	Rev. H. H. Tlney ..													
Vicarage ..	Bassett ..	3.81	6.70	.85	1.52	2.51	1.41	4.59	1.47	2.03	6.76	3.11	9.03	43.79

* The averages have been calculated from the Stations marked with an asterisk.

TABLE II.—RAINFALL IN 1915.

Stations.	Greatest fall in 24 hours.		Days with 1 in. or more.	Number of Days on which 0.1 in. or more was recorded.												
	Depth.	Date.		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
				In.												
Abbotsbury, New Barn ..	1.62	Oct. 31	2	21	25	8	14	11	9	13	13	16	19	10	27	186
*Ashmore Rectory ..	1.50	Oct. 23	7	22	21	11	9	11	6	12	9	12	20	11	26	170
*Beamminster, Ihamilton Lodge ..	2.06	Dec. 14	6	20	26	7	13	9	10	16	13	13	16	10	27	178
Bere Regis, Barrow Hill ..	1.51	Feb. 16	7	18	19	5	11	9	7	13	11	8	15	7	25	148
Blandford Rectory ..	1.35	Oct. 24	5	14	18	6	11	10	8	14	12	9	17	11	27	157
Bloxworth House ..	1.55	Oct. 24	10	21	21	7	12	10	7	13	11	7	16	9	26	160
Bloxworth Rectory ..	—	—	—	15	18	4	10	9	10	12	10	7	14	7	22	138
Bradford Peveler ..	2.07	Dec. 14	6	20	22	5	11	10	9	15	13	10	15	9	24	163
Branksome ..	1.30	July 16	5	19	20	6	12	8	10	15	9	12	19	10	26	166
Britford ..	2.48	Oct. 24	4	16	14	5	11	7	5	12	12	8	7	10	23	126
Broadstone ..	1.91	Oct. 24	6	18	24	9	16	10	9	16	13	14	19	15	27	190
Broadwindsor, Blackdown House ..	2.40	Oct. 23	7	21	25	7	14	10	10	20	11	12	22	16	30	198
Broadwindsor, Vicarage ..	2.57	Oct. 23	7	20	23	8	13	9	8	16	10	11	18	14	31	182
Charlstock Rectory ..	2.96	Oct. 23	7	24	24	8	13	8	8	22	10	15	21	15	28	196
Chedington Court ..	1.99	Feb. 16	7	18	25	8	10	9	9	17	13	9	16	13	27	174
Chickerell, Montevideo ..	1.98	Oct. 23	3	21	24	10	14	10	8	13	12	12	16	9	27	177
Corfe Mullen ..	1.81	Oct. 24	8	17	23	6	14	10	8	14	12	10	17	10	27	168
Creesh Grange ..	2.02	Oct. 24	9	19	16	7	13	8	8	11	9	8	14	6	24	143
Dorchester, Waterworks ..	2.04	July 16	10	20	20	7	13	10	10	17	12	11	16	11	25	175
Dorchester, Kingscote ..	1.70	Oct. 23	6	17	19	8	13	9	9	14	10	12	17	9	23	160
Dorchester, Wollaston House ..	2.02	Dec. 14	8	19	20	6	15	9	11	16	13	13	16	12	27	179
East Stoke, Binnewar Hall ..	1.74	Oct. 24	8	19	21	7	15	10	9	13	13	9	16	11	26	169
Fleet House ..	1.65	Oct. 31	4	16	16	5	7	8	6	11	5	10	12	6	23	124

* The averages have been calculated from the Stations marked with an asterisk.

TABLE II.—(CONTINUED).

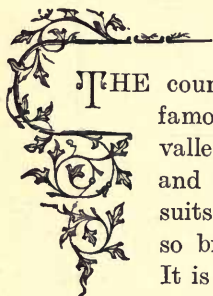
Stations.	Greatest fall in 24 hours.		Days with in. or more.	Number of Days on which .01 in. or more w. s recorded.												
	Depth.	Date.		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
Gillingham ..	1.88	Oct. 23	3	20	22	8	13	10	7	16	16	10	15	8	25	170
Gussage St Michaeli Manor ..	2.28	Oct. 24	7	18	23	7	13	12	7	14	13	8	16	8	27	166
Holme ..	1.60	Dec. 14	8	18	19	7	14	7	7	12	12	8	13	9	24	150
Horton Vicarage ..	1.92	Oct. 24	6	20	21	12	14	12	9	13	14	9	19	9	27	179
Iwerne Minster ..	1.53	Oct. 31	5	19	23	8	13	12	7	15	13	6	14	10	26	166
Kinson ..	—	—	—	20	24	11	15	11	7	18	11	10	16	12	27	182
Langton Matravers ..	1.08	Oct. 24	5	20	22	9	15	10	9	13	10	8	15	9	26	166
Littlebredy ..	2.26	Oct. 31	8	20	19	7	10	8	11	9	12	14	15	9	25	159
Lulworth East, Vicarage ..	1.60	July 16	8	18	18	9	14	8	11	10	14	8	14	9	24	157
Milton Abbey Gardens ..	1.68	Dec. 14	10	20	22	6	12	9	8	13	10	9	17	9	26	161
Parkstone ..	1.93	Oct. 24	6	20	22	7	15	11	7	14	13	9	14	9	26	163
Portland ..	2.15	Oct. 23	3	20	24	8	13	11	10	18	13	12	17	15	30	191
Shaftesbury ..	1.90	Oct. 23	6	23	21	7	13	9	9	12	13	10	11	10	25	158
Sherborne Castle ..	1.42	Oct. 23	4	19	21	8	13	10	7	13	8	11	15	6	25	158
Turnworth ..	1.66	Dec. 14	10	20	21	10	13	12	8	17	15	10	18	12	25	162
Wareham ..	1.78	Oct. 24	8	19	22	8	14	10	8	13	13	10	18	12	28	184
Wareham, Trigon ..	1.72	Oct. 24	7	17	22	7	11	11	7	14	10	7	15	9	26	150
Weymouth ..	2.04	Oct. 24	7	17	22	6	13	10	7	14	10	7	12	8	24	163
Wimborne, Bailie House ..	1.70	Oct. 24	7	20	24	8	15	11	10	16	13	11	16	12	26	166
Wimborne, Codford House ..	1.55	Oct. 23	5	19	21	6	13	10	10	10	9	10	14	9	28	186
Wimborne Whitechurch, Long Thorns ..	1.51	July 16	9	17	21	8	13	11	10	15	11	9	16	13	28	172
Wimborne Whitechurch Vicarage ..	1.44	Oct. 24	8	15	19	6	13	10	8	14	12	8	13	7	25	150



Pre-Saxon Civilization in Dorset.

By ELLEN E. WOODHOUSE.

(BEING THE MANSEL-PLEYDELL PRIZE ESSAY FOR 1915-16.)



THE county of Dorset is a pleasant land. It is famous for its rolling downs ; well-wooded valleys and rich pastures ; its wide moorlands, and fretted sea-coast. It has a climate that suits all manner of people ; its hill tops being so breezy, its combes so sheltered and sunny. It is not to be wondered that many races have made their homes there, mercilessly dispossessing each other as they have coveted the goodly land.

Its county name and many of the names of the hills, valleys, and fortresses bear witness that the Ibers were early possessors of the soil. The river names, too, retain their Celtic origin. It is sometimes found that the name of a hill has become changed in the course of time, but the names of rivers remain unchanged. The name of a hill affects but comparatively few people, speaking generally, those only who live near it. Any fresh name, therefore, soon becomes circulated and known. A river belongs to all the districts

through which it runs ; therefore to change the river's name would make a great deal of confusion.

In studying words and names we do well to bear in mind that names were known by their sound long before they were known by their spelling. All the people talked, while only the few wrote ; and it might be a long time before there arose any occasion to express the sound of a name in written letters. Also, as in early times there was no fixed standard in spelling, the letters used to convey the sound of a name depended entirely on the writer's own ideas.

The art of bridge making was not practised in very early times. The rivers formed natural boundaries, and to cross them would be usually undertaken as a hostile raid. In these cases a tree trunk thrown across the banks of the river sufficed for most purposes where fording was not possible.

The Romans, however, when they settled in the land, opened up the country with their straight, well-constructed roads, and could not have felt their work completed without bridges. There remains only one authenticated Roman bridge in the county. It is at Preston, three miles north of Weymouth. There must have been many others which were ruthlessly destroyed in the troublous times which followed the Roman evacuation of the island. At Fifehead Neville a small, rudely-built pack-bridge stands beside the ford, the core of which might possibly be Roman, but there is nothing by which its age can be determined.

The Roman Emperor Hadrian built a bridge over the river Tyne at Newcastle, A. D. 120. A few years ago the wear of time and traffic made it necessary to replace Hadrian's bridge, with a new one. Mr. Wheeler took the contract for the bridge inserting a clause which secured his right to the oak piles of the old bridge. He gave one of these piles to his son, Canon Wheeler, then Rector of Haselbury Bryan, who took great delight in fashioning it with his own hands into the oak lectern now standing in Haselbury Bryan church.

These instances apparently complete the record of Roman bridge building in Dorset.

FORDS.

The Roman roads crossed rivers by a *Trajectus* in the form of a paved ford, the road being thus carried under, not over, the stream; and beside this construction there often was a *Pons* for foot passengers. With the return of lawlessness, however, these *Pontes* went to ruin, and were sometimes replaced by rafts for foot passengers which retained the earlier name in a modified form "punts."

The paved ford remained and was called a Brig (Celtic *Briga*), but was essentially an under-water structure, so that Filey Brig, near Scarborough, a ridge of rocks dipping gradually under the sea, fairly represents the early idea of what a bridge should be.

A typical example of a paved ford with the foot-bridge beside it is seen at Mappowder Water, the paving of which has been renewed as the stones have worn away.

A few Dorset fords retain their Celtic names.—Fiddleford recalls the time when the land was a forest (Gaelic *fid*, a forest). Hanford was the old ford (British *Henfordd*). Redford was a ford, pure and simple (B. *Rhyd*.) Winford, the white ford (Welsh *Gwen*, white)—while Blandford stood in front of the ford (B. *Blaen y ford*d).

BOUNDARIES AND MINOR ROADS.

The ancient Britons had two kinds of roads or trackways. The first, a roadway for wheeled vehicles, was formed by throwing up a wide bank or causeway with a ditch of considerable depth on either side. The minor roads were much narrower, being used only for horse and foot traffic; and the term hollow or covered way has been given to them because the high banks gave shelter and concealment to the wayfarer. These were formed by digging a moderately broad and deep ditch and throwing up the soil into a bank on one or both sides of the trackway.

It has been suggested that many of the earthworks may have served a double purpose, being available as roadways, and also as boundary lines and divisions between the property of neighbouring tribes, just as there are borough boundaries in these days. The Rev. W. Barnes, in speaking of these dykes and boundary roads, says :—" Who can believe that the Britons or Belgæ could have manned scores of miles of a low bank or shallow ditch over which men or boys might have gone anywhere with a single stride ? " They represent evidently divisions of districts amongst the tribes, as decided by mutual agreement. These ancient trackways converge towards two centres in Dorset. Badbury Rings, near Wimborne, is the northern centre ; while Maiden Castle, near Dorchester, is the southern. Amongst those leading to Badbury Rings is one of great antiquity, still discernible descending the slopes of the southern bank of the river Stour in the direction of the British settlements on the chalk downs of Littleton and Charlton parishes. On the opposite side of the river several similar ways may be easily distinguished leading eastward to Badbury Camp, from the sites of the British villages on the downs of Tarrant Monkton, Rawston, and Keynston.

Starting presumably from Shaftesbury and leading from the British fort on Winklebury Hill is a grass lane sunk deeply between high banks which goes towards Cranborne. When it reaches the hill side it enters a typical British road with an entrenched track, where travellers are completely hidden from sight as they climb the hill. It makes a very safe and secret way into the stronghold from the north. The track winds up and round the hill in spiral fashion, and opens at length upon the south slope of the down into the Ox drove or Ridgeway. It was evidently a cattle track from one settlement to another, for it kept to the hill top as being the only safe way to avoid surprise attacks. The lowlands, with their tangle of forest and swamp, afforded most excellent covert for marauding men and beasts.

A Celtic or Belgic boundary called Comb's Ditch begins a little south of Clenston church. It ascends the brow of

the hill opposite Whatcombe and, running parallel to Lalee and Whitechurch, extends to Colwood and Anderson, beyond which no traces of it have been observed. It is composed of a single bank and ditch, the former being always on the western side. In the best preserved places it is 10 feet high, and in some parts the bank is broad enough to have formed a road. It is not made in a straight line, but forms bends and curves, as if with a design to avoid obstructions such as trees and bushes.

A Roman road apparently went from Poole to Badbury Rings. It has been traced in a private lane at Upton. The *dorsum* is plain a little beyond Cogdean Elms, where two large barrows stand to the west of it. The Romans probably made a convenient landing-place at Poole, whence they directed their marches to and from the station at Badbury. Tracks of the Roman road, called Ackling Ditch or Dyke, are found in the direct line of their traditional route from Sarum to Badbury. It is noticeable at Woodyates, where lies the county boundary. It is very perfect for four miles running across the downs, a parish boundary following it for three miles. It is five yards wide across the top, and four, five, or six feet high. Traces of side ditches remain, and in several places they cut into the bank and ditch surrounding a barrow. This is perhaps the most striking example of the embankment of a Roman road remaining in the country. It runs for miles in a straight line in bold and sharp relief over the open down, and the magnitude of the work and its situation are alike imposing. When it leaves the down it appears as a hedgerow at the side of a lane with the parish boundary beside it. It is traceable in Crichel Park and on Witchampton Common; a road has been made along the course of it, which is then followed by a lane for two miles near to Badbury Rings.

Leaving Badbury the ridge runs through Shapwick, crosses the Stour a little below the church, and on through Little Coll Wood to high ground; it can be traced through fields in Winterbourne Kingston, as in Tolpuddle. There are remains of the ridge on Puddletown Heath and in Kingston Park.

The Roman Road to Ilchester left Dorchester through the west gate, following a straight course to Bradford Peverel, then crossing the Frome to Stratton and on to the high ground north of Frampton. It was described in 1796 as a "*dorsum* broad and high and paved with flints"—and it is still plainly to be seen in the fields beyond Stratton and at Grimston Common Field as an elevated ridge.

At a distance of half a mile from Dorchester, a straight Roman road runs for two miles and a half to a tumulus on Bradford Down—a parish boundary follows it in its course to Eggardun Hill—in many places it is quite conspicuous. It was the old Exeter road, and traces are found of it beyond Chideock, mounting Chardown Hill, passing over Stonebarrow Hill, through Cold Harbour, and on to Charmouth. There it divided, one branch continuing along the coast, the other going by Axminster to Honiton.

The plough discovered a vicinal way from Eggardun to Abbotsbury by unearthing the paving stones. It is also known that a vicinal way went from Dorchester to Monkton at a right angle with the Icening Way. It appears to have led to Weymouth, as there seem to be a few traces of it on Ridgeway Hill.

Beside the road from Bindon to Weymouth there runs for several miles a ditch like Wansdike. It is found at the west end of Moigne Down. It runs parallel with the road, crosses it, and disappears at a short distance beyond Pokeswell. It was probably an ancient roadway for wheel and cart traffic. The Rev. W. Barnes thought that the old hollow road near Came rectory was a branch of this road, and that an ancient trackway on Whitcombe farm might also be part of it, as traces of a very old Celtic road have been found in two places in Dorchester leading in the direction of the Wareham road.

A whiteway of great antiquity with formidable banks on each side has given its name to a farm in the parish of Knoll, in the Isle of Purbeck. It leads northward across the heath nearly to Wareham, and in a south-west direction it crosses

near Steeple church and proceeds to Steeple Leaze. Another branch diverges through Harpstone Lane to Kimmeridge. It appears to have been at one time the principal thoroughfare in that part of Purbeck, but some portions of it are now wholly deserted.

A boundary line between Egleston to West Tyneham appears to commence at a place called Tyneham Cap on the summit of the South hill, and to extend in a direct course to the top of the opposite hill northwards.

One of the oldest trackways, according to Canon Bingham, starts from Iwerne, the Ibernio of the Romans. It joins another from Banbury Hill near Ibberton Park, and climbs Bell Hill, passing Bulbarrow and on through Ansty, Hartfootlane to Chesilborne, and from thence through two of the Piddles to Maiden Castle. It was the herepath or warpath of Britons and Romans alike, and it is so called in Chesilborne in the enumeration of the Saxon boundaries. The lane is very narrow and bounded by high banks ; and Canon Bingham says further that within his memory the waggoners who came for hurdles blew cows' horns vigorously, so that the way might be cleared before them. The day's march of a Roman soldier was "twenty-four miles in eight hours, neither more nor less," says Kipling :—a Roman mile being 1,000 paces—"Head and spear up, shield on your back, cuirass collar open one hand's breadth—and that's how you take the Eagles through Britain !" The principal camps and fortresses throughout the county are approximately that distance apart, so this herepath must have been trodden by the Durotriges on the war path, armed with flint weapons and terrible to behold in the ferocity of their war paint. After them, by Britons in woven garments brandishing their superior bronze weapons, and subsequently by Roman warriors in their glittering armour marching with their long slow stride—"Rome's Race—Rome's Pace."

From Rawlesbury Rings a deep old trackway leads from the camp by a gentle slope southwards to the valley beneath, used evidently as a cattle drive. After passing through fields

it joins the London road. This is not a road at all, but merely a bridle path, and could have no connection with London. Possibly the name may be derived from the Celtic, *Llyn* or pool (*Llyn claen* being the derivation of *Londinium*) with the dun or hill rising above it, as those are its exact conditions.

The London road reappears running still southward through three Ansty meadows, crossing the Divelish brook, and finally merges into the herepath in Hartfootlane.

A very narrow trackway leads eastwards from the top of Ibberton Down to Houghton Stubbs. It ran on the top of the down and then led the way into the old Milton village, until it was lost above Milton mill. Another branch runs through the corresponding valley on the north side, through Houghton and across the down eastward, where it is still known as a right of way and is used as a halter path.

PLANT NAMES.

“Excellent herbs had our fathers of old,
Excellent herbs to ease their pain.”

Very few plant names can be traced to our Celtic forefathers. We know they grew flax, for the Druids wore linen garments, and it grows wild in many parts of the county. They called it *Lin*—from which is derived our word linen. Vetches, they apparently grew for fodder, because its name comes from the Celtic *gwig*. *Stellaria Holostea* had the fatal effect of leading the wearer astray and causing them to be pixey-led. *Digitalis purpurea* recalls the fairy folk, or at any rate their gloves. Carrots they ate, for they called them red (ear); ferns they noted grew in swampy places, so they named them verne. *Ranunculus repens* with its creeping roots reminded them of ravens' claws (*hram*, a raven) so rams-claws is still its name in country places. Apples they grew, for Avalon received its name because of its famous apple orchards. Osier beds (*gwern*), too, were very necessary in those days of wattle and daub.

Woad, *Isatis tinctoria*, does not grow wild in Dorset. It has given its name to Glastonbury in Somerset (*Glastum* from *glas*, blue) because of its fields of woad ; its original name being *Glastum sativum*. It is a biennial, so would quickly die out when not cultivated.

Many of the most abundant flowers have been given the prefix of some animal or bird. Those named after the dog imply that it has not much value, but grows in great profusion. The dog violet is most abundant, but scentless ; the dog mercury grows freely, but is useless ; dog roses have many thorns and grow high above reach.

Cowslips bloom when cows go out to grass ; cow wheat has a seed of no food value, but cow parsley and pig parsley are delectable fodder. Buttercups grow in good pasture land, bull rushes are large and unapproachable in their marshy surroundings.

The calf's snout appears on arable land ; hart's tongue and adder's tongue ferns are found in moist places. Cat's tails festoon the hazel bushes, and a humble mouse-ear frequents waste places.

A flower with the prefix horse shows that it is a large one. The large field daisy is a horse daisy. Horse radish has a coarse leaf and root. Colt's foot and horse tails are gross growing and troublesome weeds.

Birds, too, have their special flowers. There is a lark spur, a crane's bill, a crow foot, and goose grass.

The cuckoo's arrival is heralded by two flowers called cuckoo flowers (lady's smocks and wood sorrel) and by the cuckoo pint (*arum maculatum*).

Snakes, too, have their flowers. The stitchwort makes a pleasant bed for them. Snakes' weed has a twisted root, and the snake's head fritillary has very similar mottled markings.

All these pleasant familiar names must be of great antiquity, for they are in general use, and modern scientific botanists have wisely retained them, knowing that no Latin names could replace them.

The oak (Celtic *Tann*) was worshipped by the Druids, who maintained a perpetual fire from its wood. Once a year all fires were extinguished, to be relighted from the burning wood on the sacred altar. This is the origin of the Yule log. The reviving brand was generally of oak, but sometimes of ash, and thus it comes about that in Dorset we still burn the Ashen or Christmas brand on Christmas Eve.

The mistletoe is also associated with the Druids, who thought it was a remedy for many diseases and an antidote to poison. It was ceremoniously cut by a white-robed Druid with a golden hook, the precious branches falling on a white cloth spread beneath the tree to receive them.

The mountain ash was also beloved by the Druids, and is found growing in the places they frequented. It was reputed to have the power of saving people from the power of evil spirits, and so was planted near habitations. Its Gaelic name was *caerthaun*, the quicken tree or quick beam.

Vervain (*Verbena officinalis*) was a plant of great repute, and looked upon as a holy herb by the Druids. It had to be gathered at the rising of the great Dog Star, when neither sun nor moon was above the earth to see it, and under those conditions was able to bestow the power of prophecy. The Romans honoured it also, and used it when casting lots, telling fortunes, and foretelling future events. It could drive away evil spirits, and would cure no less than thirty diseases. A piece of vervain hung round the neck by a white ribbon would avert infection. The Romans strewed their temples with its sprays, and its flowers were laid upon their altars. It is often found growing in England near some Roman settlement.

The devil's bit, or scabious, must have been always a herb of note, because its root contained a cure for every evil that man is heir to. The devil thought a plant of that character would be fatal to all his schemes, so he bit off the root—and the marks of his teeth are to be seen to this day.

PLACE NAMES.

The name Dorset itself gives rise to much discussion.—Dor is the Welsh *Dwr* for water.

Cornish *Dour*—Gaelic and Irish *Dur* and *Dobhar*, water;—set—the settlers, the seat or place inhabited. *Dorn saetan*—settlers by the water, *i.e.*, by the sea. Johnson gives another origin, *Dorn saeta*, seat or settlement “among the thorns.”

The inhabitants, the Durotriges, we have on the authority of Ptolemy, A.D. 150, were given their name because they were “dwellers by the water”—but Professor Rhys gives the meaning of the Celtic *Duro* as door, gate, or poreh.

Welsh *Dor* and *Drws*, a door—Irish *Dorus*. This word seems to survive in the word Durn—which is used for the uprights which hold the door in place.

The character of the streams and rivers is disclosed by their names and the villages through which they flow. The Piddle or Trent, which gives its name to seven villages, describes itself as *Pydeau*, a draw well or mire. Trent (*Trouent*) a winding river.

The river Allen or Trent comes from *Aluin*, fair and lovely. Frome is either derived from the Welsh *ffraw*, brisk or lively, or from the British *Var*, a stream or river. In the one form it gives a name to Chilfrome and Frome Vauchurch—and as the *Var*, we have Woodsford, a ford over the *Varia*. Winfrith from the Welsh *Gwen*, *ffryd* is the white clear stream; Terig (British *Terog*) is the clear stream.

Stour comes from the British *steir*, a river.

Ladden, *lade den* is a stream in a vale. Charmouth from Car, the head or mouth of a river, and Lyme—even in those times—was a city of ships, *Lhon borth*. Dewlish is taken from the *Dhu* dark, and lish is a corruption of the Welsh *glais*, a stream. Deverill is the dark stream. Durweston (*Dwy wys*) is a place of deep water, while Iwerne (*yweŕn*) is a swamp.

The shore between Portland and the “Fleet” where the bridge carries the traffic is called the Kamber, probably from *Camb*, Celtic for crooked, curved, in reference to the

curve or bend of the shore. At Portsmouth a similar part of the foreshore by the Hard opposite Gosport, is also called "the Kamber"—for the same reason. The river Cam, or crooked river, derives its name from the same source. Portland suggests Portus (British *Porth*), a harbour. The stone slingers must have been formidable foes, and excellent guardians against hostile visitors, with their strong views on the intrusion of Kimberlins or strangers.

The river Wey, as well as the river Wye, is from the Welsh *Gwy*, a river, and especially a slow river. It bubbles forth at the Wishing Well at Upwey, widens out at Broadwey, forms the tide pool at Radipole (*redeg-pool*), and finds the sea at Weymouth. There seems no explanation as to the meaning of the river Cerne—which points to the supposition that it may be pre-Celtic.

Poole and Bradpole take their names from *pwl*, the marsh or pool. The Rev. W. Barnes thought that Wareham, or Durngueis, as it was called by the Durotriges, is derived from *Dwrin*—diminutive of *dwr*, water—meaning a little sea or a little water.

Owermoigne is either from *g'ower*, a small enclosure, or *g'over*, a small spring or stream.

One of the most poetical and homelike Dorset words is Combe. The Welshman wanted to give a pleasant place a pleasant name, and so he called a valley a *cwm*. Dorset abounds in combes, and they are aptly described by their prefixes.

Thus Encombe is the great valley, Corsecombe, the bog-valley; Compton, a town situated in a valley; Lysecombe (*llws*), a secluded valley; Kimmeridge (*Cymmre*), the place of hills and hollows; Nettlecombe (*Nettel*), a valley where the toll was taken; Melcombe (*Moel*), a conical or round hill above a valley; Plush (*plis*), a comb or dell; Batcombe, the pasture valley.

When we reach the uplands we find that Tout or Towte was a watcher's hill, so Nettlecombe Tout was an observation station of much importance where tolls were gathered.

Keynston comes from *cefn*, a ridge or rock. Badbury, *bad* or *abad*, was a Celtic habitation or town. Chaldon, *celvandum*, a retreat or hiding place in the down. Pentridge is a wrinkled hill, from Pen, a head, and Kridge, creased or crumpled. Pensilwood, the wood of a height like a chimney (sel) or smoke hole. Creech is old Welsh for a stack heap, or hill. Shaftesbury, or *Caer Palladour*, meant the same in both tongues—the staff of a spear; which might be derived from its appearance, as it stands like a promontory or point above the vale, on an almost perpendicular hill. Maiden Castle (*mai dunun*) was well described as the Hill of Strength.

The pleasant pastures of Purbeck, as distinct from the heath lands, give its name, Porbeck. Tilly Whim caves, *Touten Vegn*, describe themselves as holes in the rocks. Durlstone is a perforated rock, and the Druid stones can never be forgotten at Little Mayne (*maen*, a stone). Wootton Glanville is suggestive of the Blackmore forest (*Coit*, a wood) in which it is situated. Evershot recalls the time when wild boars roamed its woods.

Pimperne is a puzzling name. It has been suggested as being derived from Old Welsh *Pimp*, five, and *Werne*, a meadow, or *ern*, a pledge. The parish in 1790 comprised four arable common fields beside pasture, the Pimperne Mead of thirty-five acres, some enclosures and coppices. In Domesday Book it is entered as Pimpre, the 'Pre' being apparently equivalent to the Latin *Pratum*, French *Pre*, a meadow.

Pokeswell might be Puckswell, or Pixies well, for the Celts made a special cult of holywells, believing them to have the gift of healing. It is not an uncommon name, because in the parish of Langton Matravers there is a farm called Pucklake—a place near Ilminster is named Puckington—and in our younger days we were taught when gathering flowers to leave "some for the Nixies and some for the Pixies."

There are few Roman place names in the county. Those given have generally a Celtic addition. Dorchester was another Roman camp by the water *dwr*, or the river *Varia*, Celtic

"*ver.*" Stratton recalls the Roman street through which the paved road ran. It has been thought that Wimborne was the town called by the Romans Vindocladia, which was their way of pronouncing the British *Vind* or *Vint*, the head of two rivers, and *cladh*, a ditch or rampart. Dr. Stukeley says, however, *Vint* is white and *Gladh* is a river, hence our word glade, the birthplace of a river. The river Tarrant or Trent has a bilingual derivation, British—*Dwr* went, white or clear water—Roman, *Torrens*, a rapid stream.

There is one place which still retains its Roman name. It is the woody height of Mount Silva in Buckland Newton.

CELTIC FAMILY NAMES.

These names give an indication of the occupation of their owners or of some special personal characteristic.

The Dorset peasant is still very skilful in bestowing nicknames, most of which are very apposite.

We find a good many sidelights thrown on the conditions of life in early Britain through these names. One was a King (Wren, Welsh *vrenhin*), another a Knight or a Servant (*Gill*. Gael, *Gillie*). A smith was needed (Gover, from *Gobhar*), also a greysmith (*Lithgow*, Brit.) A cobbler was in great request (Creed, Welsh *Crudd*). A gardener was necessary for growing herbs and simples (*Gard*, W.), and for the flocks a sheepfold was imperative (*Kail*, W.) That they were law-abiding folk is seen in there being an oath giver (*Crerar*, W.)

One was fair of face (Cluett, W. *Glywdd*), another was crooked (Croom, W. *Crumm*), a third was curved or bent (Crew, W. *Crw*), the unfortunate Mog was a slave, and worst of all there was a contemptible fellow (Doggrell, Gael. *Dogwra*).

True men were there as in all communities, for one was a brother Frowd (W. *Frawd*), and another possessed a heart, Creed (Gael. *Cridhe*); and, as all sorts go to make a world,

there were red people (Goff, B. *Gough*); a fat man, Tuffen (W. *Tulfen*).

Smart men of fashion wore trousers (Lodder, W. *Lloda*), and a cloak (Tory, W. *Taryn*,—and one warrior was celebrated for his dagger (Tuck, W. *Twca*).

We see, too, where they lived. Belben lived at the end of the pass (*Beal Ben*, Gaelic)—Hall on the hill or slope (*Hallr*, G.)—Combes came from a valley and Lear from the sea (*Llyrd* W.)—Howe overlooked a tumulus (*hangr*) and Havard recalled high summer (*Hafard*, W.)—Fooks lived in a damp foggy place (*Fwg* W.)—and Ross on a moor, *Rhos*, moor or heath.—Dobar's house was by the water (*Dobhair*, W.)—and Hiscock by the red water (*Wysg*, Brit.)—while Dare lived near a sacred oak (Celtic). The Picketts and the Pigotts were presumably ancient wood-picker men (*Pic*—vest. green wood picker).

ROMAN FAMILY NAMES.

“Clare” was the illustrious (*Clarus*)—“Galpin,” the beardless. Joyce was a humorist (*Jocosus*)—but Keech was blind (*caecus*). Payne was countrified and came from a village (*Paganus*). Peaty was a disagreeable, leering fellow (*Paetus*)—and Vigor was very senseless (*Vecors*)—Wyatt travelled a good deal serving writs (*Viator*), and Arkell was famed as either the maker or possessor of a small chest (*arcella*).

Trevett was at the cross roads (*trifidus*), and Foss close to the ditch. Daubeney was a British tribesman—Tink was a *tinctor*.

Some of the Romans were craftsmen evidently, and were known by their house signs. Horlock's sign was that of a timepiece (*horologium*) and Scutt's that of a shield (*scutum*). Scammell had a little bench (*scammellus*) to show his skill in carpentry, and Troke, the wheelwright, specialised in hoops for wheels (*trochus*, a hoop). Pomery sold fruit (*pomarius*),

and Vyney lived at the sign of the pine tree. Mussell was as quiet and inoffensive as a little mouse (*musculus*), while Pardy was as fierce as a panther (*pardus*) and Whittle was as strong as a steer (*Vitulus*).

There are apparently some contractions of the sonorous Roman names which made them more easily pronounced by British tongues. For example, Benedictus reappears as Bennett. Jesty suggests a shortened form of Justinian, and Tite of Titus ; while Stacey seems an affectionate diminutive of Anastasius.

ROMANO-BRITISH FAMILY NAMES.

Antell came from the East, the sun rise (*Anatole*)—Cavell lived in a cave or chapel (*Cafell*)—Chilcott the anchorite was domiciled in a cell in a wood (*Kilcoed*)—Kilford in the cell by the road—Waygood was in the wood road (*Via coed*). Keevil had a chamber and Priddle a stool (*predella*). Cleall was known by his voice, and Besent by his gold coin.

Dominy was born on Sunday (*Dominica*)—and both Dibben and Dunn were of the dominant people. Drew was a Druid—Perfitt was a perfidious person—while Ridout had passed through troublous times, and eventually had been restored to liberty—(*reductus*).

DIALECT WORDS.

Much has been written of Celtic glamour, Celtic mysticism, and Celtic romance, so one expects to find words and expressions suggestive of poetry and imagination. A few expressions taken from Nature are charming. Colours are thus described “as blue as a grege” (wild hyacinth), “as black as the raven’s wing,” “as pale as ashes” “as white as a blossom of snow” (a snowflake), and “as white as driven snow.”

There are others which are descriptive rather than poetical. To eat with a good appetite is said to "knoek it in honey sweet." Young people when they have finished growing "have come to the cap sheaf." Great agitation causes one to "shake like a leaf"—and when the troubles of life are lessening "one leaves the suds of turmoil and enters the calm of the rinsing water."

One boy when working by himself is said to be "a boy." Two boys in the same employment make "half a boy"—but three boys working together are said to be "never a boy at all."

We find the words which have survived the many changes have been those used more especially by the slaves or captured people, and which show for the greater part the everyday life of the people.

When children were born they slept in a "cradle." The boys played "truant" and wore their clothes into "clouts." They ate "rashers" of bacon, had famous "pasties" and drank "metheglin" and "beer"—still called Cwrw in Welsh. Their houses had "doors" and they used "mops" for cleaning them, and crocks and gridirons (griedio, to scorch) for their cooking. They made "baskets" and kept geese, and sometimes fetters (gyve) were necessary. They used a "harrow" on their "arable" land, and their "harvest" was the reward of their toil. They had "kilns," used "mattocks," and hewed "ashlar" stones and made "wrix" or wattle work.

Great warriors they were with their "gavelocks" and "claymores," also expert sailors in their "coracles." Their hermits were called "*mendwy*" (Welsh), which is picturesquely translated as "God's slave."

When a chieftain was ill, they tried to ease his pain with a "fleame"—but when he died they bore him to their highest hill and built a "barrow" to mark his resting place, and laid a bell beside him—in case he awoke and wanted help.

They understood the verb "to know"—and also the one "to stand." They disapproved of loud speaking, intimating that it was "croaking" like a frog or raven, or "creaking"

like a door or corncrake. The rain made "puddles" for them (*plod*, a pool) over which they "skipped."

When they garnered their harvest they did not forget the pixies, but left some fruit or corn for them to go "cole pexing"—but they disrespectfully called a wet and dirty place a "pucksey" as if they thought Puck—the merry wanderer of the night—was responsible for misleading travellers into bogs and ditches. "Old Scratch" with his black nutting bag was their dark god whom to meet meant death, and the death goddess Wyod is responsible for weird superstitions. They used the word "athwart," and we use it still when we speak of walking "athirt the grounds."

The Romans are responsible for the expression Cold Harbour—a name given to deserted Roman villas, where those travellers could lodge who carried their own bedding and provisions. The Maze was an ancient Roman game, and it was called a "Troy Town"—a word used in Devonshire for a tangle. We use the word when we say we are "mazed" or confused.

Street is another Roman word we have adopted. It is taken from *Strata* or paved roads, and when a place bears any modification of the word—such as Stratton—it is proved to have been connected with one of the great Roman roads which linked together the chief strategic positions in the island.

These are a few traces left to us of the Dorset of long ago.

The county is a palimpsest written over and over again, by peoples from many lands. They have all left some mark of their occupation, but the original characters can occasionally be faintly read, and we can picture our forerunners in their work and pastimes, and even catch some echoes of their shrewd and homely talk as they sat around their cleft-wood fires through the winter evenings.

One bond unites us. We can claim the same heritage and distinction, for we are alike in being "Dorset folk, born and bred."



Old Portland.

By the Rev. HERBERT PENTIN, M.A.



THE water-colour views of Old Portland which are here reproduced *en bloc* for the first time* have a little history of their own. Soon after John Penn, afterwards Governor of Portland, had built Pennsylvania Castle as his residence he commissioned J. W. Upham, an artist of some repute who for the latter portion of his life lived at Weymouth, exhibited at the Royal Academy, and enjoyed the patronage of the Princess Augusta, to paint at his leisure eighteen views of Portland. The work was spread over the years 1802-5.

During the changes in the ownership of Pennsylvania the pictures remained in the Castle, and in the year 1887 passed into the possession of Mr. J. Merrick Head, who

* C. Hullmandel reproduced a few of them with *minutiæ* of difference in detail.



I. General View of Weymouth and Portland

for many years was an active and valued member of the Dorset Field Club. By the kindness of Mrs. Merrick Head the views are now reproduced in memory of her late husband for the benefit of our members, many of whom were his personal friends while he lived at Pennsylvania Castle; and the pleasant task of writing some descriptive letter-press to accompany the plates has been entrusted to me. A few lines will suffice for most of the pictures; but some of them demand a longer notice. The photographs are the work of Mr. E. H. Seward, of Weymouth.

Quite a number of Upham's other paintings of Portland and of Weymouth and the neighbourhood were reproduced by Alken, Bluck, and others. The only earlier series of Portland views known to me are the smaller set in ink by the Swiss artist, S. H. Grimm, dated 1790 (they are in the British Museum), and a cruder and still smaller set (anonymous), dated 1785; but extant single views of about this date suggest that other sets may have been issued.

It should be mentioned that the following notes have had the advantage of being read through by two writers on Portland—our member, Mrs. King Warry, and Mr. Robert Pearce—and although they do not agree with everything here written there is not very much that they would wish to alter.

I. General View of Weymouth and Portland.

This view of Weymouth as it was at the beginning of the 19th century, with the Isle of Portland, and several frigates in the Roads in attendance on George III. who was going on an "aquatic excursion," was sketched from a field near the old Cavalry Barracks, about a mile from the town of Weymouth.

Portland, though now a peninsula, is always called an island, which not improbably it once was. The local idea quaintly expressed is worth recording: "The island has

become less and less an island as the years have gone on." Which, being interpreted, means that the narrow isthmus (the Chesil Beach) now joining Portland to "the adjacent island of Great Britain" has become more and more well-defined with the passing of the years. The insularity of the old-time Portlander was exemplified thoroughly by the man nearing 80 who said that he had "never been to England yet, and had no intention of ever going." But the old-time Portlander will soon be extinct.

II. *Rufus Castle.*

This Norman castle has by ancient tradition borne the name of "Rufus," and there is hardly sufficient reason to challenge the tradition that it was a royal castle built towards the end of the Red King's reign* as a fortress chiefly against invaders by sea. The Keep, which formerly stood in a field, but is now at the cliff's edge, has become a mere shell; it is of unusual shape, pentagonal, and is cleverly constructed of Portland stone. Its walls are over seven feet in thickness, and are pierced with small circular loopholes for archers; hence the building is also known as Bow and Arrow Castle. The machicolated corbels, in groups of three together, would have been utilised for hurling down stones, melted lead, pitch, and other missiles.

The Castle has figured only once in English history—in the Civil War, wherein the Empress Maud attempted to dethrone Stephen. The castle was the King's and, according to William of Malmesbury, he fortified it; but in 1142 it was taken by Robert, the turbulent Earl of Gloucester, on behalf of his half-sister, the Empress. Maud was at

* It is a curious coincidence that the first baronial owner of the Manor of Portland should have been known as "Rufus." This was Gilbert de Clare (1243-95), who was the 9th Earl of Clare, and also Earl of Hertford and of Gloucester. "Rufus" was not at all an uncommon surname or nickname in early times.

II. Rufus Castle



this time closely besieged in Oxford by Stephen ; but instead of going to her help Earl Robert captured the castle at Portland, and also other places in Dorset, which the King allowed to fall into his hands rather than abandon the siege of Oxford. At this time the Castle may well have suffered damage, and the lands around would almost certainly have been plundered and wasted.

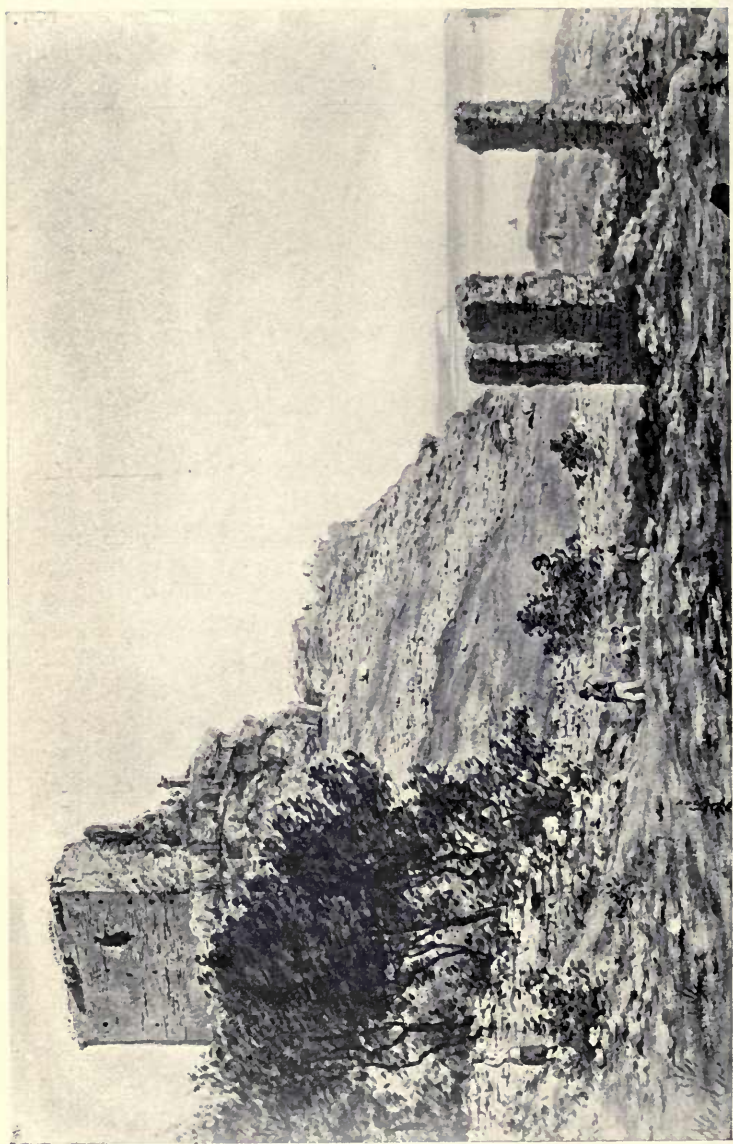
The portions of the building that remain suggest that the Keep was originally of two stories, and perhaps there were three, containing three small rooms, as this was a common number, although the ancient local tradition is that the work was never finished. Still, it is reasonable to assume that there were the usual substantial castle-walls with their fortified turrets, enclosing an inner bailey and an outer bailey, and a building near or adjoining the Keep for lodging the soldiers, and probably a small chapel. The fortified gatehouse would have supplied accommodation for officers, and the Keep itself, though the last retreat of the garrison in times of war, would have contained in times of peace apartments for the Constable, or Warden, of the Castle, and perhaps for his wife, family, and servants. It is true that the Keep at Portland is very small indeed, but contracted space was an unpleasant feature in Norman fortresses ; they were not built for luxury, or even for comfort. The principal room in a Keep, solely accommodating the commandant, was frequently nothing more than a dark and narrow den ; and if a lady shared the rule of the tower she had also one apartment for all purposes ; and, as for any children or servants, they managed by day as best they could on the ground floor over the dungeon, and at night spread themselves on straw.

Hutchins, however, quotes another ancient tradition that the Castle was used as a place of refuge for the islanders, who may have felt a certain proprietary right in it if, as has been asserted, William II. imposed a land-tax on them in order to complete the building. It had ceased to be a fortress at any rate before Tudor times.

The only known Constable, Warden, or Keeper of the Castle was Richard de Clare, 8th Earl of Clare, and also Earl of Gloucester and of Hertford, in Henry III.'s reign. This Richard had revolted with other barons under Simon de Montfort against the King ; but, quarrelling with de Montfort, he became friendly with and was in attendance on the King in 1259. It was about this time that Richard de Clare was appointed Keeper of the Castle at Portland.* And we may assume that he and his son came here and were attracted by the Island, for this son, Gilbert de Clare, called "Rufus," obtained possession of the Manor of Portland from the monastery of Winchester by exchange. Rufus was a great soldier, and played a leading part in the reigns of Henry III. and Edward I. He married firstly a niece of the former, and secondly a daughter of the latter ; and it was he who proclaimed Edward I. as King. The son of Rufus, who succeeded him in his three earldoms and in his estates, including Portland Manor, was also named Gilbert de Clare, another great soldier ; he was killed at Banockburn (1314), and in turn was succeeded in the titles and estates by his sister, Elizabeth de Clare, known as the Lady of Clare, who endowed in the year 1336 University Hall, Cambridge, afterwards Clare Hall, or College, and gave it a body of statutes in 1359. Her niece married Edward III.'s son, Lionel, Duke of Clarence, and their great-grand-daughter by marriage into the York ducal family became the grandmother of Edward IV., and so the Manor of Portland once again came into royal hands.

The small Norman door-arch in the Keep seen in the picture fell down while Penn lived at Portland, and he built in its place a larger arch in Tudor style, perhaps suggested by Wyatt's "Tudor" arch at the entrance of Pennsylvania Castle grounds. Several large fragments of what may have been portions of this original Norman door-arch lie within

* His epitaph is recorded : "Hic pudor Hippoliti, Paridis gena, sensus Ulyssis, Æneæ pietas, Hectoris via jacet."



III. The Ruins of Old S. Andrew's Church

the walls of the tower. Penn, to whom George III. handed over Rufus Castle, also built later a bridge well imitating the Norman style of the Keep, and connecting the building with the field sometime known as "Castle Hays" (*i.e.*, the Castle hedge, fence, or boundary), which field might well have been one of the baileys of the Castle. The large imitation-Norman doorway in the Keep, adjoining the said bridge, was also made by Penn; it is a delusive piece of work, but is paralleled by other cleverly-constructed "Norman" arches, built by local labour in the last century, in the West Cliff Quarries and elsewhere. Penn made the large archway in order that his carriage might be able to pass through the Castle.

III.—*The Ruins of Old S. Andrew's Church.*

When was Christianity introduced into Portland? There are many reasons for believing that the Island was a vigorous Pagan stronghold, with its chief centre in the district still known by the semi-sacred name of "Grove," and that it yielded slowly, late, and perhaps last, locally, to the new Faith. There were few Celtic missionaries in Dorset; and the Saxon Church in Wessex, strong though it was in some respects, was harassed by frequent Danish raids, and did not or could not do much in the way of church extension.

On the other hand, it is possible that monastic missionaries unconnected with Wessex, a monk and his companion from over the seas, brought Christianity to this citadel of heathendom; in which case "Holy Point" may have been the site of their landing place or first preaching. "Breston," near by, has been suggested as a corruption of Preston (Priest's town); and "Monk's Plot," also in the neighbourhood, has been connected with the same idea. This ingenious theory would place the establishment of Christianity in the southern portion of the Island; but it has also been surmised that there was a small Saxon church of stone which was destroyed by Earl

Godwin, and that it stood on the site of the Norman church of S. Andrew. The only evidence suggested, however, is a portion of "Saxon" work in the north wall of the chancel of the ruined Norman building, and this evidence by itself is very inconclusive. Indeed, until we reach the Norman period we do not really touch solid ground as far as the church history of the Island is concerned.

Who built the Norman Church of S. Andrew? The Manor of Portland in Henry I.'s reign and until the year 1296 belonged to the Priory at Winchester (it had belonged to the Church of Winchester for a few years in Saxon times), and the monks of S. Swithun may not at this time have been too occupied to take some care for the spiritual needs of their tenantry here. The Norman church was certainly built in the main of Portland stone, although in "Coker's Survey of Dorset" (c. 1630) the stone is stated to have come from Caen, and there are one or two Norman carved fragments still existing which cannot be distinguished from the famous stone of Normandy. The Conqueror, the father of Rufus, was buried at S. Stephen's Abbey, Caen, which he had founded; the Norman Archbishop of Canterbury, Lanfranc, who crowned Rufus, was formerly Abbot of Caen; the Norman Bishop of Salisbury, Roger, a great church-builder, who was Henry I.'s Chancellor, hailed from Caen. Had the monks of Caen, indirectly, a little finger in the church at Portland?

What do we know of the Norman church? It seems to have been erected later than, and near to, Rufus Castle, in order to enjoy its protection. Judging from the ruins, the church was a long narrow edifice, low-built but distinctly well-built in Norman style, consisting of a square-ended chancel with an east window, and nave with a porch and doorway on the south side, and a small narrow side-aisle also on the south side. The chancel-arch appears to have been of a little later date, in the Transition Norman style, and therefore not earlier than 1135. The windows would have been small and placed high up in the walls, but these had to be rebuilt

in later times. Portions of the original chancel, east window, chancel arch, and south exterior wall still exist. There is little reason to doubt that the church had a small tower, rising between the nave and the chancel, crowned with a stunted spire springing from a corbel table. Portions of a corbel table, and four corbels (three with animal faces and one with a human face) still lie among the ruins of the church. But, for reasons well known, there was a fatality about Norman towers ; many of them fell within a few years of their erection. This probably happened at Portland, for later on a plain and moderately high Early English tower (detached from the church nearly three feet) was built on the slightly raised ground at the west end of the nave. (In 1552 the tower contained two bells, and in post-Reformation times two more were added, but all of them disappeared possibly during the turbulent Cromwellian days at Portland and were never replaced.) The tower (through the doorway of which the people probably passed to get to the main entrance of the church on the south side, there being no entrance on the north side) was standing in the year 1732, as in that year several pounds were spent on its repair, and this tower doorway is still in existence and *in situ* ; it now serves as an entrance to the southern portion of "the bleakest churchyard in Wessex." The idea that Governor Penn placed this doorway in its present position is not only incorrect, but very unlikely ; he had quite enough personal troubles with some of the islanders without irritating all of them by taking liberties with the ruins of their old parish church. Another erroneous idea (Hutchins starts it) is that the church was dedicated to S. Andrew in the year 1475 ; but in the year 1324 Nicholas de Keirwent was presented to the "parochial church of S. Andrew," and there is no reason why the church should not have been dedicated at its foundation to the fisherman-Apostle. The dedication was a popular one in Norman times, and earlier. At any rate, Portland is not included in the list of un-dedicated Dorset churches at the close of the 13th century.

From the *Inquisitio Nonarum* (c. 1340) we learn that the parish "was burnt and destroyed by enemies of England" (i.e., the French). Probably, the church was included in the devastation of the year 1339. Mr. Merrick Head, after making a careful and sympathetic excavation of a portion of the existing ruins, suggested that practically a new church was built about this time on almost the exact old site, though all available portions of the Norman building were incorporated. His plan on page 122 of the Dorset Field Club's *Proceedings*, Vol. XIX., is very helpful. The rebuilt church (it is plain that the whole of the north wall and a portion of the south wall and the whole of the west end of the nave were rebuilt) and also the churchyard wall on the north side were of the rudest description and of very indifferent workmanship. Stone fragments of various dates lying about suggest that the church had to undergo a reparation in almost each of the successive centuries, until the year 1753, when the walls and roof had fallen into such a ruinously decayed state that the parishioners decided not to repair it further, but to collect funds to build a new church. They realised that to repair substantially the old church would cost half as much as to build a new one; that its site, almost overhanging the very steep cliff, was a source of danger; and that its size was not sufficiently large to receive half the inhabitants owing to the increased population. In the year 1755 services in the church ceased. Unfortunately, the architect and builder of the new church of S. George was permitted by his contract to cart away any part of the old church for building the new. The small narrow "side-aisle" at the middle of the south side of the old church has not altogether unreasonably been thought to have been a large buttress to support the main building; but there are signs in the foundations to suggest that this south aisle probably contained at some time a very small chapel with an exterior doorway and a still smaller chapel or sacristy. There was no chancel doorway in the Norman church; but one was added on the south side in later times. The Norman

arch with a 17th century inscription from Psalm cxxii., placed in modern days over the existing ruins of this chancel doorway, certainly belonged to the Norman doorway, the principal entrance, on the south side of the nave. Additional windows in the chancel were added in later times ; and there was a stone cross on the east-end gable. The floor of the church was composed of thick brick-coloured tiles with an "old gold" glaze (no pattern discernible) and similarly glazed bricks ; the roof was tiled, but thick slates seem also to have been used. There were frescoes in the church, and the glass of the windows was of a curious transparent mother-of-pearl tint which must have looked very beautiful in the sunlight. The seating of the church in its latter days was effected by a gallery and by moveable high-backed "settles" in the nave ; they were in a very decayed condition. The lectern Bible dated 1634, and Prayer Book dated 1706, belonging to the church are in the Dorset County Museum. The latter book was presented to the church in 1708 by Queen Anne, and contains her autograph.

Mr. Merrick Head, in his earlier article on Portland, in Vol. XII. of the Dorset Field Club's *Proceedings*, gave a list of the tombstone inscriptions from 1670 onwards in the old churchyard ; and in Vol. XIX. (p. 126) a photograph is reproduced of one of the several existing grave-slabs nearly contemporaneous with the later portions of the Norman church of S. Andrew. They seem, however, to be of too early date to have had any connection with the "Chapel" in Wakeham Street (see *infra*) as has been suggested, and they are not necessarily memorials of ecclesiastics.

It may be of interest to record that "Under-hill" funeral processions to the churchyard did not come through Easton and Wakeham, as would have been expected, but up the Verne Hill and along the East Cliff to the church-path gate. Traces of this entrance can still be seen in the wall near the modern "Bow and Arrow Cottages."

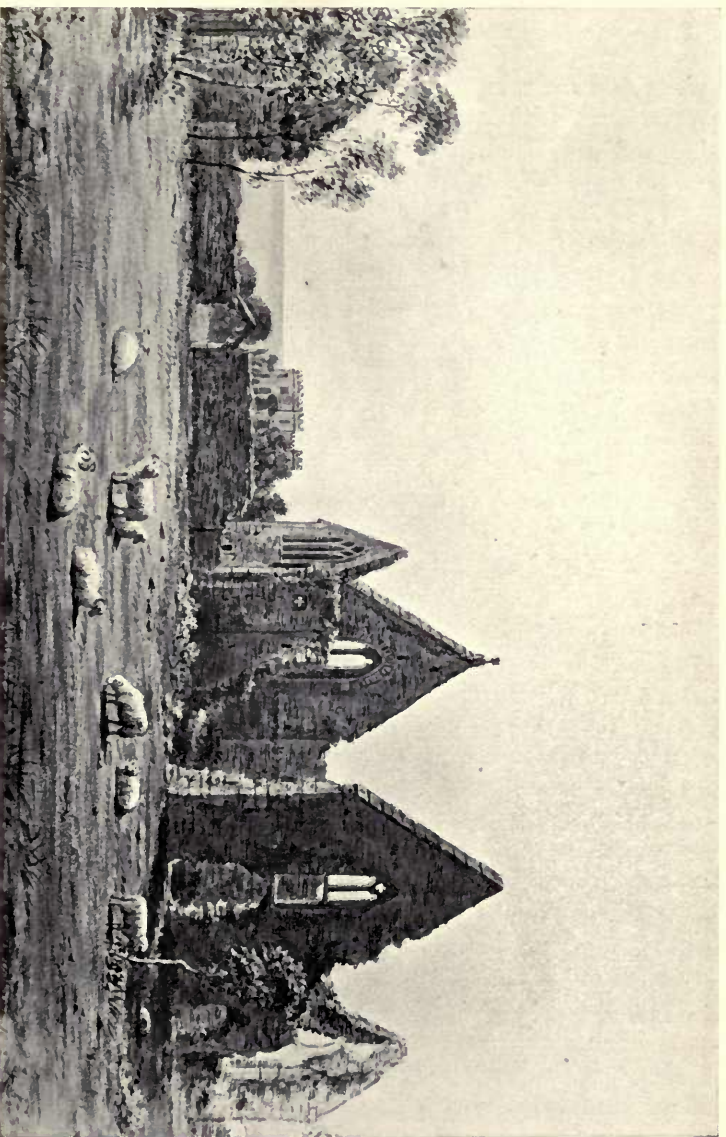
IV.—*The pre-Reformation Chapel.*

The ecclesiastical building in Wakeham Street shown in this picture appears to have been begun in the 13th century and finished in the 14th century ; but as far as can be traced there are no records of or direct references to it before the 16th century.

Leland, who came to Portland some time between the years 1534-43, may unconsciously be referring to it when he wrote "Sum say that in tynes past ther was a nother paroch chirch in the isle, but I there lernid no certente of it." He saw "the personage" (*i.e.*, the Parsonage), and describes it as "the best building in the isle."

Grose, in his *Antiquities* (1773-87), writes of the same building : "It is pretended to have been the Parsonage House, and although the living is a Rectory is vulgarly called the Vicarage House . . . From the form of what remains of this edifice it is more probable that it was an oratory or small chapel." In his list of "Antiquities in this County worthy notice" he includes "Vicar's Chapel at Portland."

The latest editors of *Hutchins* casually but without any authority or detail refer to the building as a "religious house," and other later writers have also seized hold of the suggestion that it might have been some kind of monastic establishment. But there is a more likely solution, and the Clare family may be connected with it. It is well known that in the 13th century buildings called oratories, chantries, or chapels sprang up not annexed to the parish church, for the use of private persons, their households, and guests, served by a resident perpetual chaplain, with the consent of the incumbent of the parish. These separate yet dependent chapels, in time, however, were almost bound to and indeed frequently did impinge on parochial rights, and were the cause of many ecclesiastical disputes. Some of these chapels received such substantial benefactions in the way of endowment as to be constituted parish churches ; many others,



IV. The Pre-Reformation Chapel

from one cause or another, became too impoverished to continue to support the parochial chaplain, and they sank into disuse. It may be worth noting that at Portland in the year 1396 John Bernard, "chaplain," was instituted as rector ; so was William Whithing, or Whitlyng, "chaplain," in 1414 ; and Robert Alston, "chaplain," in 1473. The "chaplains" of these *ecclesiolæ* were sometimes in addition called "perpetual vicars." They were quite distinct, at first at any rate, from the "chantry priests" of later times attached to parochial churches, and they were not infrequently promoted to full parochial cures, in some cases holding their "chaplaincies" as well, owing to a dearth of clergy at the time.

Soon after (or possibly even before) Henry VIII. cut the Pope adrift, the "chapel" at Portland was converted into and was called the "Parsonage." It was also popularly known as "the Vicar's House," or Vicarage. It was never known as the "Rectory," though the rectors of old S. Andrew's Church* or the resident curate lived in it. There is a record (1784) that during the Civil War it was "demolished and burnt down by the usurper Oliver Cromwell, and hant been rebuilt ever since." In 1626 there were two tithe-barns belonging to the "Parsonage," but in 1784 only one, of which all trace has now disappeared. It is thought that the rectors, or resident curate (the rectors of Portland had a *penchant* for non-residence), after the "Parsonage" was destroyed as a habitation, lived at what is now the last house at the bottom of Wakeham Street (numbered 219), which has the initials of Bartholomew Mitchell thereon and date ("1640. B. M.")—a Carolean house immortalised in Thomas Hardy's *The Well-Beloved* as Avice's cottage, but, alas ! falling into dilapidation.

* The most distinguished rector was the well-known Royalist Humphrey Henchman, D.D., who after the Restoration became Bishop of Salisbury, and of London.

The "chapel" as shown in Upham's picture (1802) has now become the mere fragment of a ruin. It has undergone sad ill-usage; it is said that large portions of it were carted away to help in various buildings, including the Union Workhouse at Weymouth. All that remains of this valuable relic of Old Portland is a part of the south wall, 24 feet long and 15 feet high, containing the lower portion of a window of two lights (partly blocked up) and small fragments of another to the east of it; and a portion of the adjoining south-west wall, 11 feet long and 15 feet high, containing the lower portion of a small window, also roughly blocked up. There is a buttress at the south-west angle of these remaining portions of the two ancient walls, and a few fragments of carved stone lying about on the ground or built into the modern adjoining walls.

A tithe-barn seems to have been built at a later date adjoining the "chapel," which was used in the year 1848 as the Church Sunday School for girls and infants while the boys went to the Jacobean School in Straits.

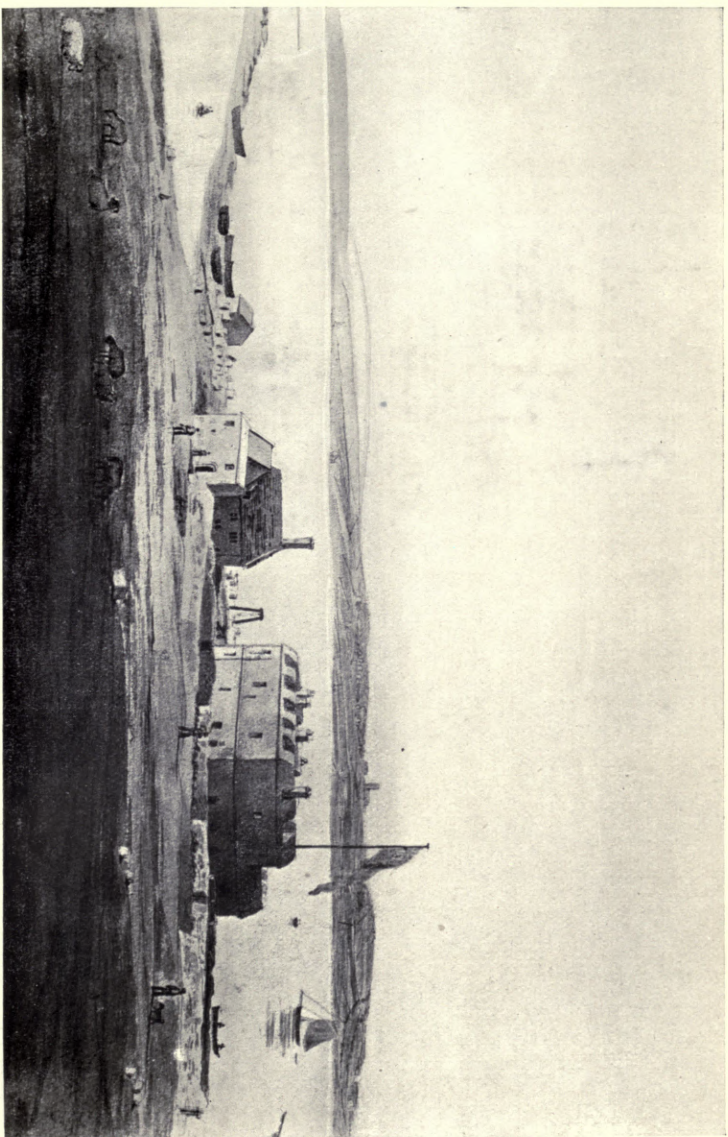
V.—*The Tudor Castle ("Portland Castle").*

There is nothing fresh to write about "the bulwark at Portland" built by Henry VIII., since the valuable article on Portland Castle, by Mr. Henry Symonds, F.S.A., was published in Vol. XXXV. of the Dorset Field Club's *Proceedings*.

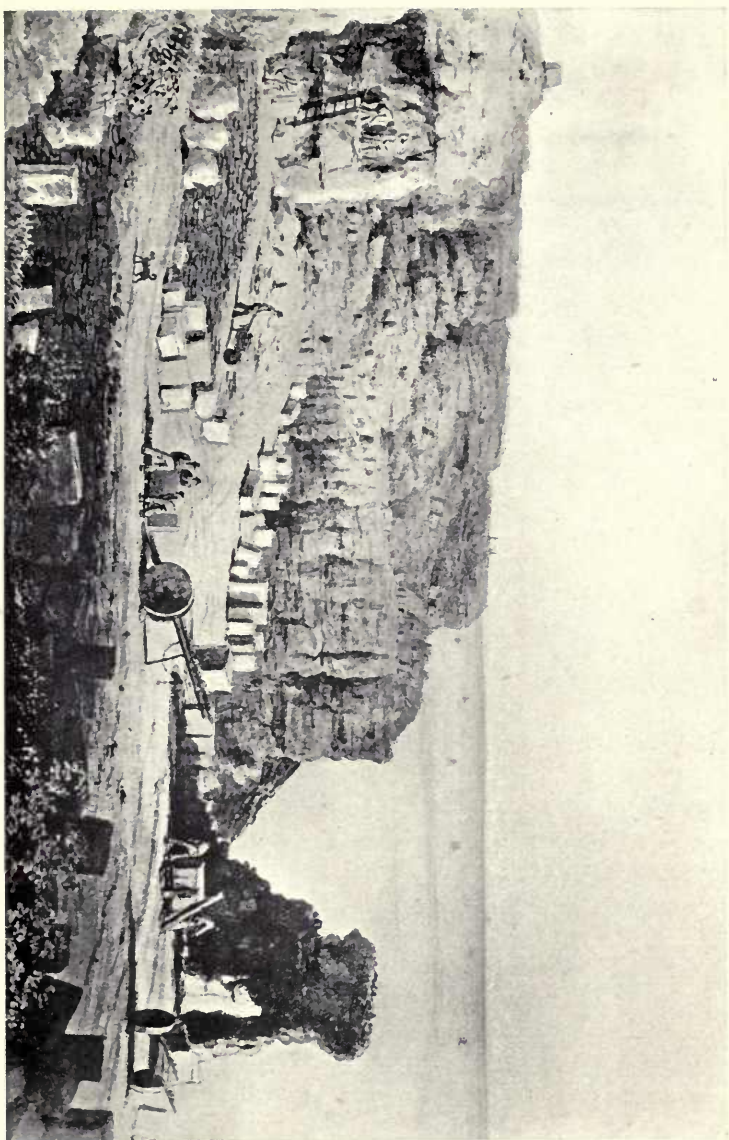
Dimly in the distance across the water can be seen the old Ferry House, known as the Passage House, or more colloquially "the old King Bill." There were bitter controversies on the Island when the present Ferry Bridge and Railway Bridge were built.

VI.—*Stone-quarrying.*

The earliest quarrying on the Island on a large scale (in the 17th century) was done under and along the East Cliff



V. The Tudor Castle ("Portland Castle")



VI. Stone-quarrying

in the Grove district. The wealth of stone was revealed by extensive landslips.

It is often implied in guide-books that Portland stone was well-nigh unknown until Inigo Jones used it in the reign of James I. But it was used locally from the earliest period of history. Evidence has been discovered on the Island that it was occasionally quarried for sepulchral purposes in Celtic times. In the Norman period Rufus Castle was built entirely of Portland stone, and the Norman church in the main was likewise built of the local oolite and slats. The early sepulchral slabs in the old churchyard and the "Chapel" at Wakeham are also of stone from the Island. The Fabric Rolls of the Cathedral of Exeter show that at the beginning of the 14th century Portland stone was exported in considerable quantities as far as Exeter; and there is an ancient tradition that there was a "Black Friars' Pier" on the east side of the Island, in the Grove district.* A large amount of Portland stone was purchased for the Royal Palace and Chapel at Westminster and for the Tower of London; and stone from the Island forms the outer walls of Wyke Regis Church, Portland Castle, and Sandsfoot Castle, Weymouth. The quarrying, however, in these earlier days until the 17th century seems to have been fitful and sometimes stationary.

A list of the important religious and secular buildings in London and elsewhere which were built of Portland stone in the 17th century and onwards would take far too much space. The most illustrious of them all, St. Paul's Cathedral, was quarried from the East Cliff Quarries, known as "the King's Quarry," and the bulk of the stone "sailed" from the "South Pier" (probably "King's Pier") in the Grove district. At one time there were six piers, in use or disused, along the east side of Portland, beginning at the picturesque

* The Black Friars of Melcombe Regis contributed to the increase of the port (of Melcombe Regis) by building a jetty there against the ebb and flow of the tide.

cove, "the gem of the Island," Church Ope (*i.e.*, the Opening below the Church) and along the East Weares; the remains of most of them can still be seen. The stone carefully selected and approved by Sir Christopher Wren for S. Paul's Cathedral was marked with an incised wine-glass, which was naturally known locally as "Wren's wine-glass." The marks remained on a few stones not required for S. Paul's, and at a later date they were cut out and inserted in the walls of various Masonic lodges in England, Wren having been a very prominent Mason.

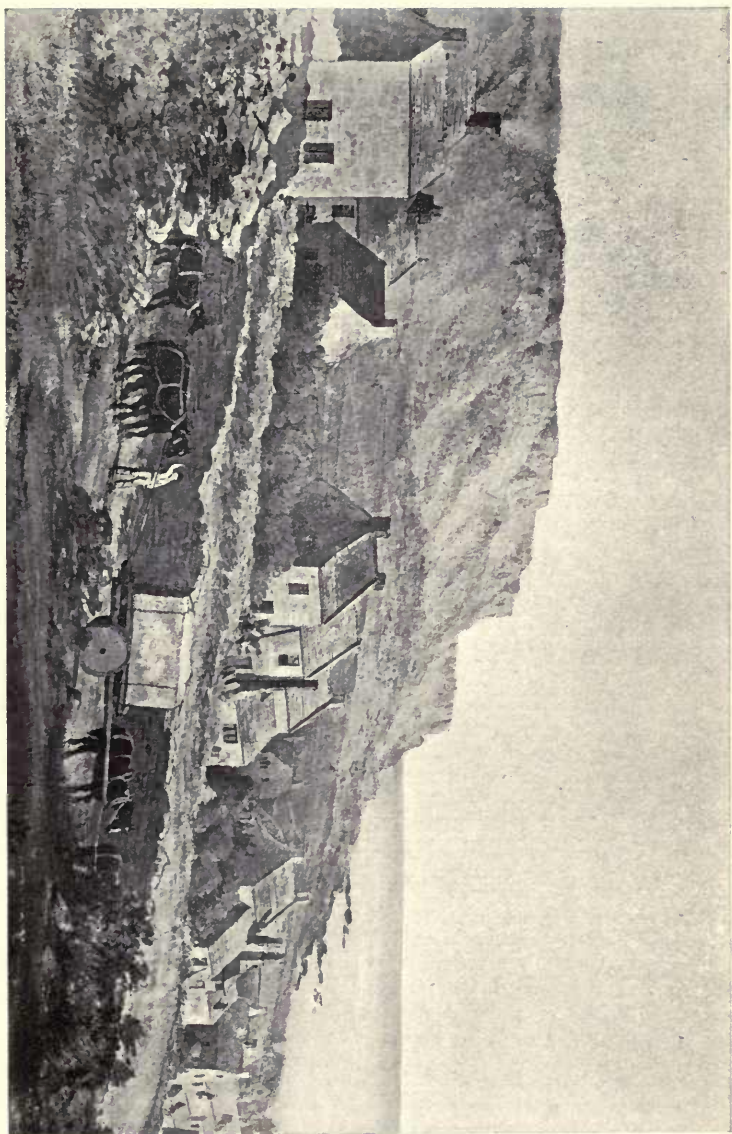
Upham's picture is supposed to show quarrying on the West Cliff to the south of the land known as "Priory" (a name obviously suggestive of hasty theories anent Winchester's early connection with Portland); * although the outstanding rock reminds one of "the Giant's Leg" on the East Cliff near the Verne. On the Ordnance map this great rock is called "Nicodemus Knob;" but Portlanders locate "Nicodemus" further west on the weare below, not far from the remains of a stone circle destroyed in a cliff fall.

VII.—*The old method of drawing the stone down the hill.*

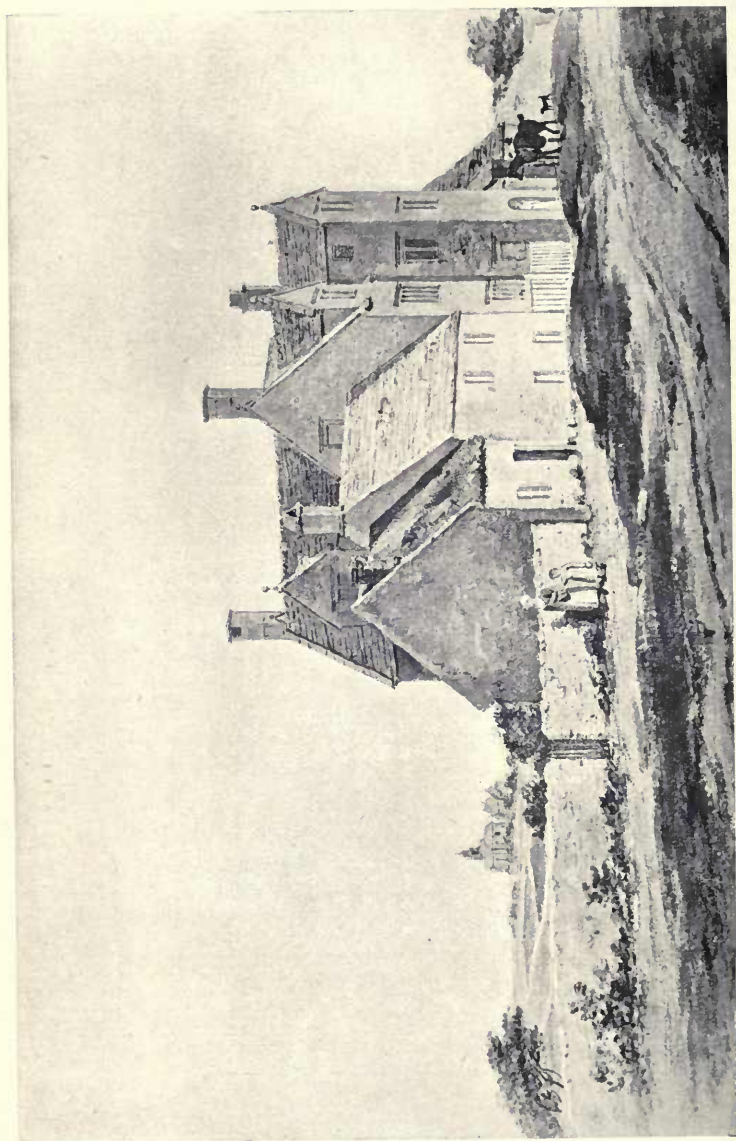
The portion of Portland shown in the picture is known as Meissner's Knapp † showing "Mallams" (or, more

* There would be as much reason, probably more, to connect "Priory" in some way with the land in the Grove anciently known as "Black Fryers" (near the site of S. Peter's Church), or even with other land in the Grove nearer the Verne and anciently known as "Hospital." Not that any *documentary evidence* has come to light of there ever having been a Dominican Priory (a house of Black Friars) or a Lazar-hospital (presided over by a Prior) at Portland. But the many ecclesiastical problems of Old Portland are very far from a solution. There was a piece of land on the East Cliff also known as "Priory."

† Dr. Meissner was the first doctor to live at Portland. Before his time the islanders, when they could not be cured by the medicinal herbs which grow in such profusion here and which were possibly planted of set purpose, sent to Weymouth for a qualified medical man.



VII. The old method of drawing the stone down the hill



VIII. The Jacobean House ("Girt House")

anciently, "Malhams" or "Molams") and a part of Chesilton. One of the crude, prehistoric-looking carts, which Seaton describes, is seen drawing the stone down the hill. These carts carried astonishing weights, yet they consisted of nothing more than a pair of very strong solid low wooden wheels about a yard in diameter and a very thick axle-tree, upon which was fixed a stout planking or platform that terminated in shafts for the horses, of which oftentimes as many as 18 were attached to a load. The wheels and platform were low, so that the stone could be more easily loaded. Sometimes, as in the picture, horses dragging behind formed the brake; sometimes a large stone fastened by a strong chain to the load was dragged along the naked road for this purpose. But the old methods are now superseded by traction engines and the Island railway.

VIII.—*The Jacobean House ("Girt House").*

Owing to Portland stone-quarrying becoming a flourishing industry many houses were naturally built in various parts of the Island in the time of the Stuarts, in the Jacobean style of architecture, many of which unfortunately are now in a ruinous condition, although some have been converted into modern dwellings.

Who built the "Girt (*i.e.*, great) House," as it was called locally, and for whom it was built, is not known. It is supposed that it was used by the Governors of the Island to transact official business on "Top-hill;" it was usually inhabited by a caretaker. It is known that John Penn bought it and occupied it (in the picture he is seen mounting his horse) while Pennsylvania Castle was being built for him, and that he afterwards gave it to a Portland man named Stone in exchange for a cottage which stood on the site of the Castle. But Stone's descendants were unable to keep up the "Girt House" in Wakeham Street, and converted it into an inn, which gradually fell into dilapidation. Old

Portlanders remember playing as boys among its ruinous portions ; but the western part of the house, which alone stood, was incorporated in two or three cottages.

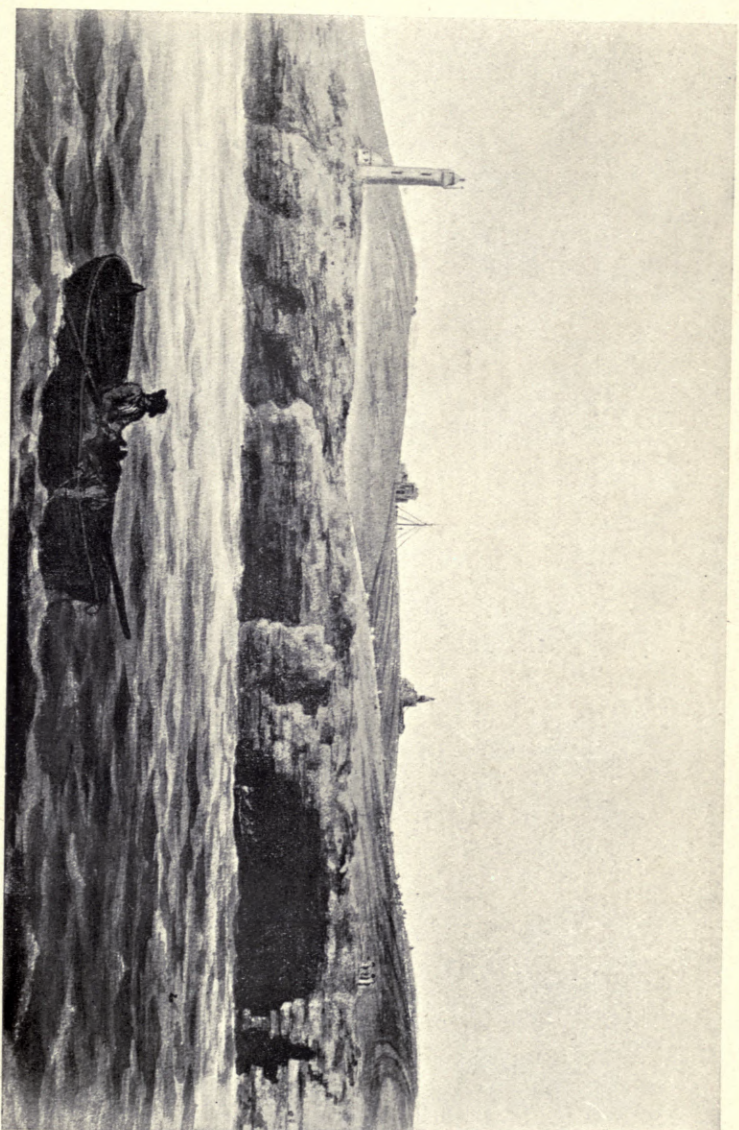
All the distinctive portions that now remain of the "Girt House" are :—An upper window of three lights (one blocked up) and a lower window of three lights converted into a doorway, facing south ; a small rectangular upper window blocked up, facing west, and another (also blocked up) facing south ; a large open kitchen fireplace and chimney, now divided by a party wall ; an upper and a lower window of three lights, each partly blocked up (a modern window is inserted in the remainder), and a small rectangular window entirely blocked up, facing north. These portions of the "Girt House" form the back rooms of two cottages numbered 20 and 18, Wakeham Street. There is also a faint outline of Jacobean windows of three lights to be seen on the exterior walls facing east, of the front of the cottages numbered 20, 18, and 16, Wakeham Street.

IX.—*The old Light-houses at the Bill.*

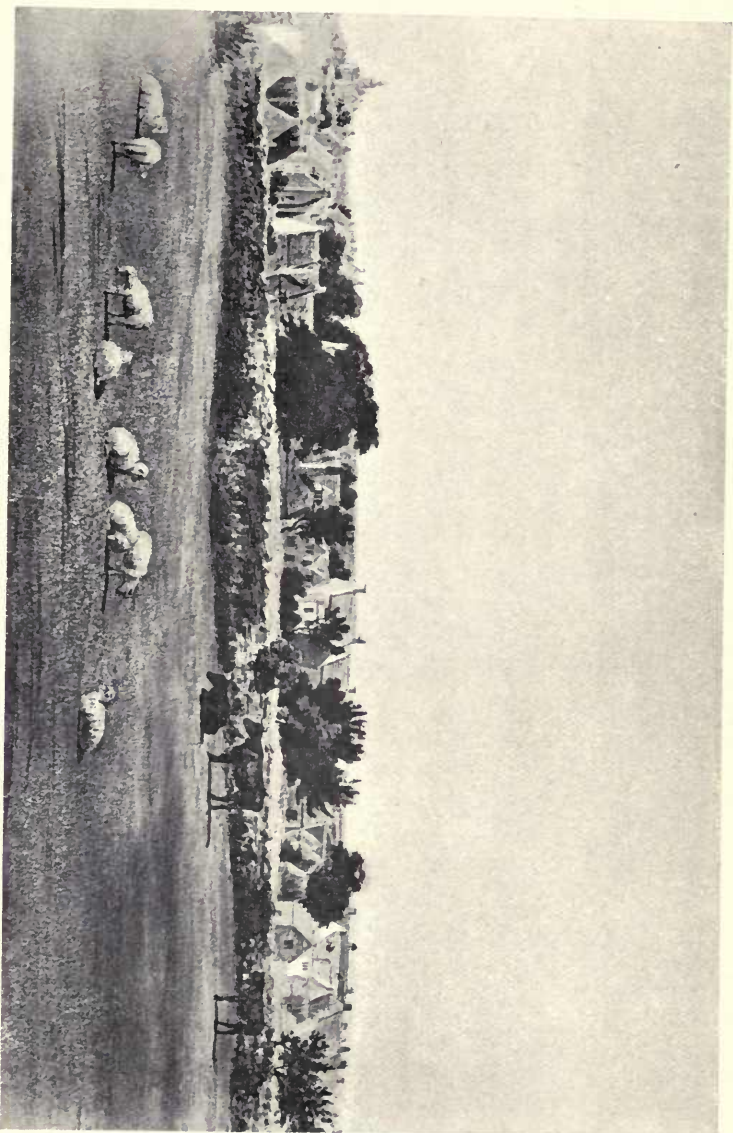
The only beacon at the Bill in olden days was a large coal fire. The upper lighthouse in the picture was built in 1716 ; the lower in 1789, replacing an earlier one. Both these lighthouses gave way in 1869 to others more effective, which in turn have yielded to one lighthouse only, near the obelisk erected in 1844 at the point of the Bill.

X.—*Easton.*

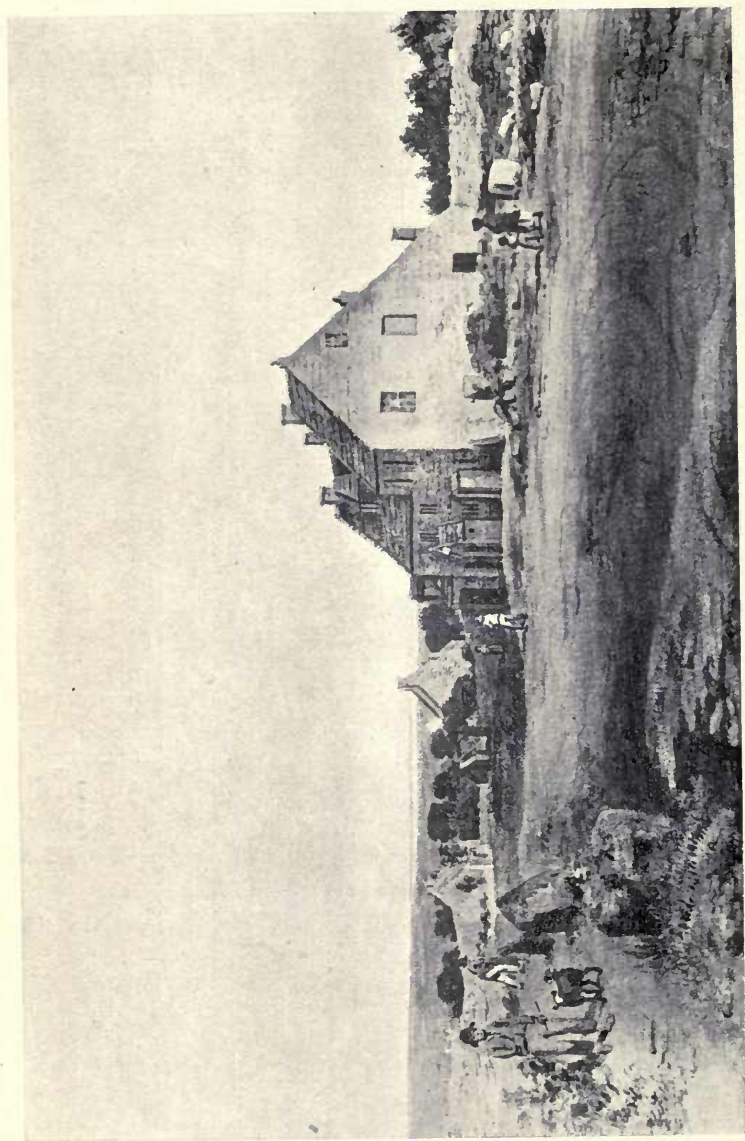
We here get the back view of Easton Street, showing Reforne Street leading to S. George's Church. Modern shops have nearly entirely replaced the Jacobean and other substantial houses with their quaint square and angular roofed porches. The old Pool in Easton Square, near where



IX. The Old Lighthouses at the Bill



X. Easton



XI. The Clerk's House

the house "Nethercoombe" now stands, was filled in about 45 years ago; it was both large and deep—deep enough for a boy to bathe in and be drowned.

S. George's Church was built, it is said, of stone from the large quarries in the Grove district; and stone from old S. Andrew's Church was also incorporated. When consecrated in 1766 it had a fourth gallery (over the chancel) with a flight of steps outside leading thereto. The music in the church was supplied by an organ, clarionet, and violoncello; there were also paid "singing-men." The "Easter Vestry" meeting was held at Christmastide—on S. Stephen's Day—and the custom still obtains.

While S. George's Church was being built (1756-66) the parishioners worshipped in a large temporary structure known as "the Tabernacle." There are reasons for supposing that it stood somewhere near the back of the present Mermaid Inn at Wakeham. Holy Communion was celebrated occasionally in the Tabernacle, and the altar-table from the ruins of S. Andrew's Church was brought up each time for this purpose and then returned to the old church. Unfortunately, the ancient Communion plate (the chalice was of silver) and some pewter disappeared about this time.

XI.—*The Clerk's House.*

The Jacobean house at the top of Reforme* Street was known for a time as "the Clerk's House" because William Butts, the Parish Clerk of S. George's, lived in it. He had his initials and the date 1765 incised on the house, and they can still be seen. It is the house in the picture with the angular roofed porch, and is now the George Inn, where, in Georgian days, like other coast inns, more was probably

* Reforme, a curious word, is often spelt "Ralphton" in old Dorset maps. "Rayforme" was a local variant.

made by smuggling than by legitimate trade. The Court Leet of the Royal Manor of Portland, a relic of "time out of mind" and certainly not later than Saxon days, is now held here on Lady Day and Michaelmas Day, or a day near thereto.

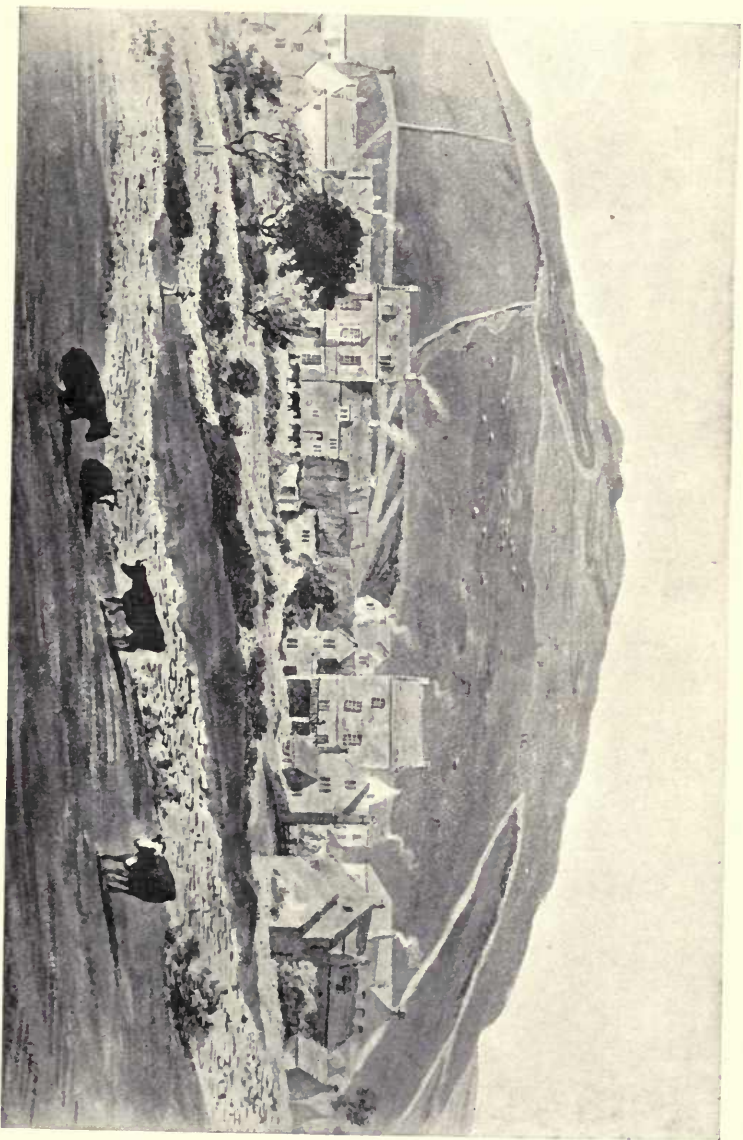
XII.—*The Verne and Fortune's Well.*

This view shows the Celtic stronghold known as "the Verne" before it was converted into the largest modern fortress of Dorset—"the Gibraltar of Wessex." The top end of Fortune's Well is seen at the base of this great hill, with the back view of the house of Mr. Robert Carr Brackenbury, of Raithby Hall, Lincolnshire (who established Methodism in Portland), and the old Wesleyan Chapel which he built in 1792 at his sole expense. Mr. Brackenbury's house is the highest house in the picture; it is now converted into two houses numbered 27 and 27A, Fortune's Well. The other large house, with the bow-window upstairs, on the opposite side of the street, is the Portland Arms Inn. George III. often lunched here. Portland lamb, "Royal pudding,"* wheatears, and other local dainties formed the menu.

XIII.—*Fortune's Well from the Verne Yeates.*

The old Wesleyan Chapel in Fortune's Well seen in the picture has been replaced by another near the same site. It was mentioned that Mr. Brackenbury "established"

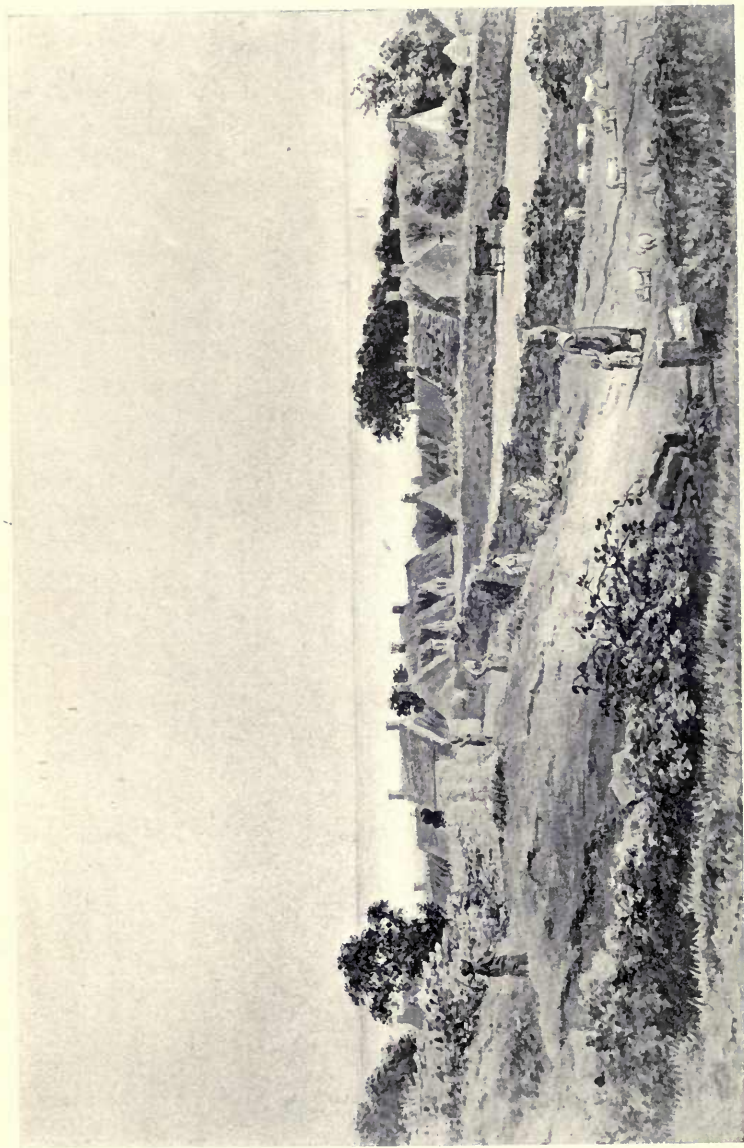
* "Sept. 26th, 1798. A numerous company of Nobility sat down to dinner yesterday at the Portland Arms; the entertainment was served up with great taste, and the usual number of small plumb (*sic*) puddings which are always made on this occasion formed a part of the Royal fare."



XII. The Verne and Fortune's Well



XIII. Fortune's Well from the Verne Yeates



XIV. A Pastoral Scene at Southwell

Methodism in Portland ; but there was a small Society of twenty members here in 1720,* and Charles Wesley preached on the Island, indoors and out-of-doors, on several afternoons and evenings in June, 1746. There is a small Georgian house still standing in which he preached ; it bears the inscription " John Stevens, 1734," and has been converted into two cottages numbered 15 and 17, Straits, opposite the Jacobean Free School (now a Reading Room). The text of one of Wesley's sermons after Sunday evening service was " Is it nothing to you, all ye that pass by ? " Another, at Southwell, was taken from the *Nunc Dimittis*. One of his hymns is headed, " Written before preaching at Portland : "—

Come, O Thou all-victorious Lord !
 Thy power to us make known ;
 Strike with the hammer of Thy Word,
 And break these hearts of stone.

The early Portland Methodists did not sever their connection with the crumbling old S. Andrew's Church, the parish church of their forefathers, and some of them took a prominent part in the building of the " new church " of S. George. Charles Wesley's visit to Portland seems to have given a real and much-needed stimulus to the whole of the religious life of the Island.

XIV.—*A pastoral scene at Southwell.*

This view was taken near the site of the modern church of S. Andrew, generally known as the " Avalanche Church." Some of the famous Portland small sheep, which were bred in thousands and now in hundreds on the Island, will be

* See *Methodism in Portland*, by Robert Pearce (3, Easton Square, Portland). This book, price 2s. 6d., also contains three chapters on the early history of the Church of England in Portland, with some old and interesting illustrations. It deserves to be known more widely.

noticed.† The separation of fields by walls of small thin local stones known as “slats,” instead of by hedges, is a true Portland feature. The inn at Southwell, replacing an older one with the same curious sign, is known as “The Eight Kings,” at first sight suggestive of the eight Henries of England. But the Portland theory is that it refers to the eight Saxon “kings” who rowed King Edgar’s barge on the Dee at Chester on the occasion of one of his annual progresses through the land. The Curator of the Dorset County Museum thinks that the sign may have a military origin. The old 8th Regiment, now the Liverpool Regiment, used to be called for short the 8th Kings.

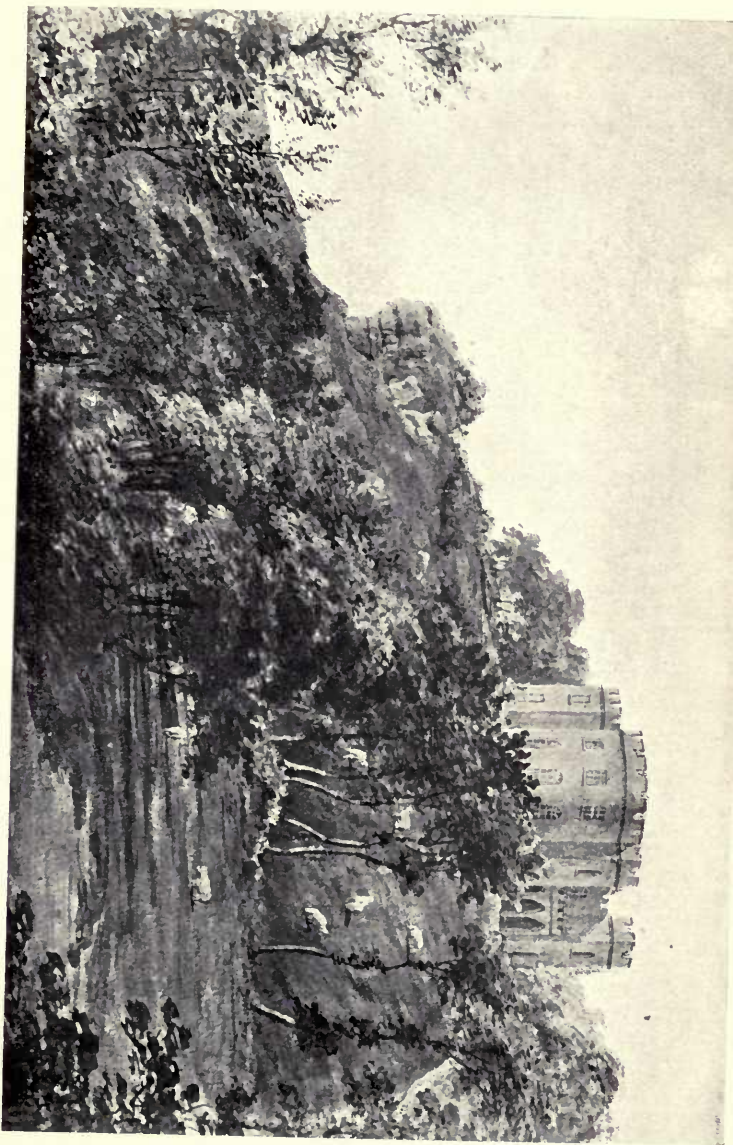
Looking at Upham’s view it is hard to realise that the total population of Portland at the last census was over 17,000; when he was painting his pictures, a little more than a century earlier, the whole population of the Island was about 1,600.

XV.—*Pennsylvania Castle.*

The erection of this castellated mansion was suggested to John Penn by George III. It is said that the King pointed out the picturesque possibilities of the site and offered him a grant of some of the land thereabouts, and that Penn regarded the royal suggestion as a command. But there was a political motive, too. These were the days of the Napoleonic wars, and Penn’s special mission at Pennsylvania Castle was to watch the English Channel and receive information from sea-captains and others who acted as secret-service agents as to the movements of the French ships.

The architect of the mansion was James Wyatt, and the building was completed about the year 1800, when it was

† One wonders if the ancient “Rams’ Gate” in the Grove was directly connected with this, if it would be too far a cry to connect it with Pagan sacrifices in the chief Pagan centre of the Island.



XV. Pennsylvania Castle

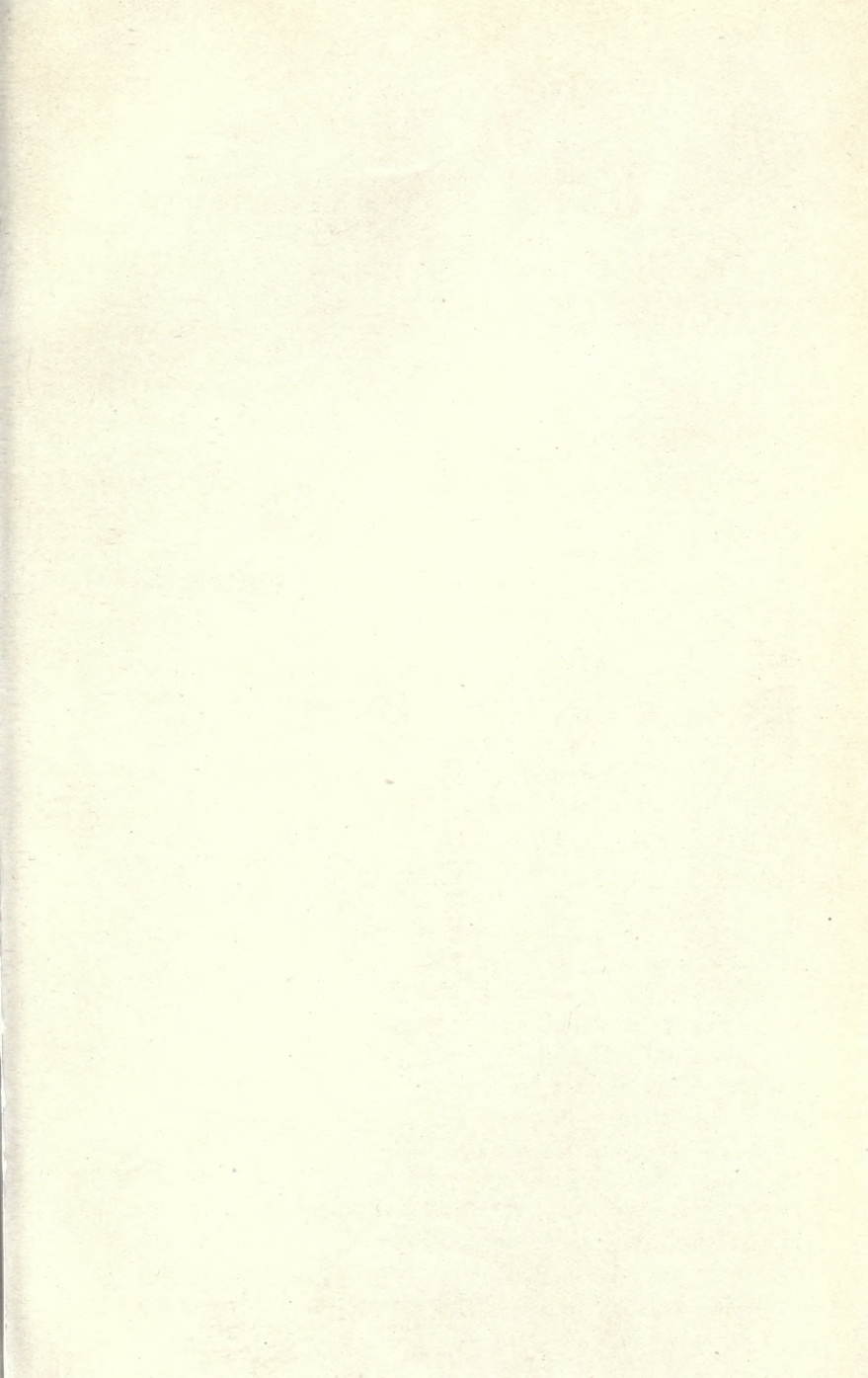
formally opened by the King's daughter, Princess Elizabeth. Many family portraits, manuscripts, books, and other relics of the famous Quaker, William Penn, the founder of Pennsylvania, U.S.A., were brought from Stoke Park, Bucks, to the new Castle named after the American State, where they remained until recently. The tower, containing the circular dining room and the circular boudoir (now a bedroom) over it, commanding magnificent and wide sea views, is one of the most attractive features of the house. John Penn planted a large number of trees in the grounds, which give the building surrounded by them a peculiar charm. He introduced the red deer into the Island, and was intensely proud of watching them browse in his miniature park.

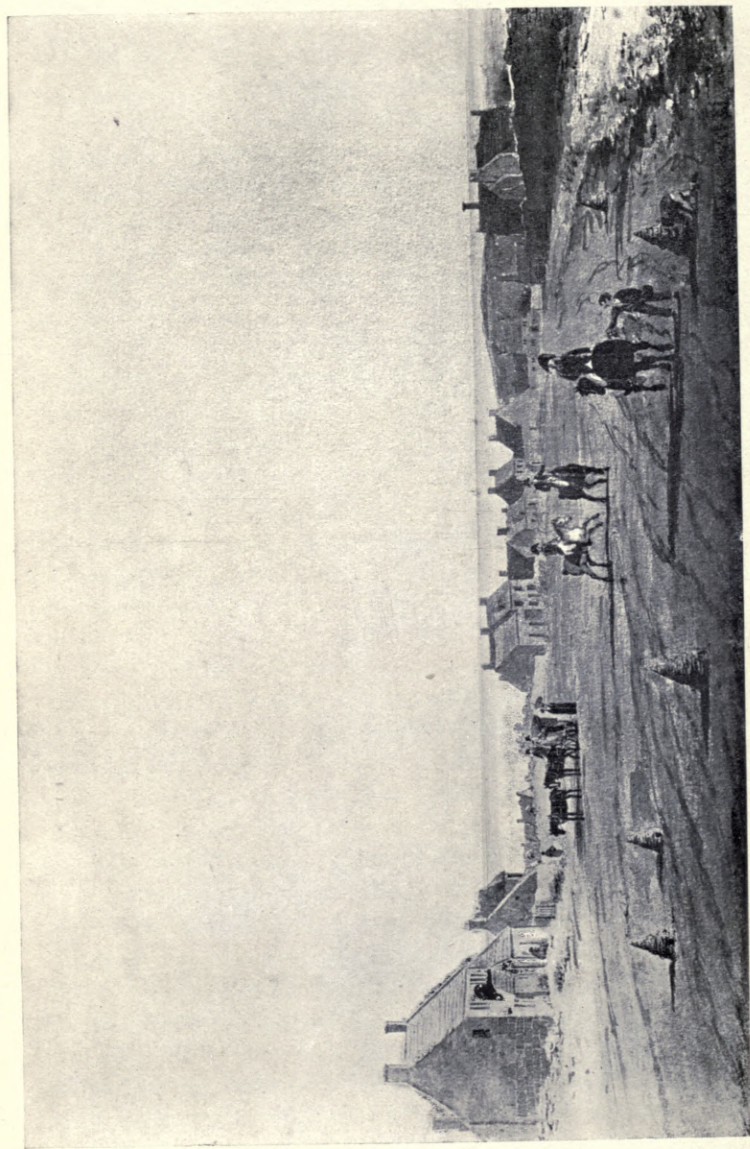
It must not, however, be thought that Penn was free from difficulties in building the castle. There were several freehold cottages within the area he had marked out for his grounds, and these he had some trouble in obtaining; but eventually he was successful. Stone's cottage on the proposed site of the mansion was obtained only by giving the "Girt House" in exchange—a costly sacrifice. Another cottage within the imitation-Tudor entrance gateway he converted into a castellated Lodge ("Ivy Cottage"), and lit it with a number of very narrow lancet windows; here his Swedish friend, Baron Gustavus Noleken, lived and died. Penn also castellated a Jacobean cottage, and converted it into a billiard room (it is some distance from the house, and, like "Ivy Cottage," has fallen into disrepair). Other cottages he obtained and utilised for his outdoor servants; others were turned into stables. He also had to divert the old road to Southwell and make a new one, which most of the Portlanders for years refused to recognise. The parishioners' right of way through his grounds to their ruined Parish Church of S. Andrew and Churchyard, of which they made diligent use, was also a source of constant irritation to him and of profitless litigation. The islanders also considered that they had a right to go into Rufus Castle, and they went there "as free as air." In

the cliff below Pennsylvania Castle, Penn built a large oval-shaped bath ; his valet had to fetch the sea-water from the Cove below. But the bath had been built in " Parish land," and at the Court Leet he was amerced half-a-crown a year by the islanders as an encroachment rent. Penn objected to pay it and gave up using the bath ; it still exists, but is in a decayed state. As time went on, however, by friendliness instead of by the force of might, he gained the goodwill of the people.

John Penn was the grandson of the famous Quaker and the great-grandson of Admiral Sir William Penn, who, curiously enough, had fought the Dutch off Portland in 1653, and was sometime Member of Parliament for Weymouth. His mother, to whom he was devotedly attached, was Lady Juliana Fermor, one of the beautiful daughters of the first Earl of Pomfret, who was frequently with Queen Charlotte at Weymouth ; and John Penn's first acquaintance with Portland and his resolve to settle here were probably brought about while on a visit to his mother at Weymouth. But he himself never married ; he had had an unfortunate attachment in early youth from which he did not recover, although he organised a Society which had for its object an improvement in the domestic life of married people.

Many royal and notable personages, including George III., Queen Charlotte, and their children, visited Pennsylvania Castle at the beginning of the 19th century ; and Penn, who was an intellectual man (some of his poems, plays, and pamphlets were published), was also in a small way a patron of art and literature ; at Cambridge he had obtained the degrees of M.A. and LL.D. In his later years, when his health began to fail and he was less mentally alert and a prey to nervous fears and strange fancies, he still had many visitors at the Castle ; but these consisted mostly of doubtful people who derived or expected to derive from him some pecuniary benefit. He lived about two years after leaving Portland, and died of acute senile decay at the age of 74 at his Buckinghamshire home, Stoke Park, in the year 1834.





XVI. The Snaring of the "Snalter"

For long the superstitious believed that the uneasy shade of John Penn visited Pennsylvania Castle, or might be seen wandering noiselessly in the glades, or scanning the Channel waters with keen and eager gaze, his spare, alert figure clothed as in life with the knee breeches, shirt frills, and silver buckles of his time. The belief has not altogether died out even to-day, and it is said not without a reason.

In the grounds there is an old and curious, perhaps unique sundial, the dial itself being incised on an inverted anchor.

There is a bust of John Penn in the Weymouth Guildhall.

XVI.—*The Snaring of the "Snalter."*

The shy, lively, clannish birds, wheatears, are known at Portland by no other name than "Snalters," or "Snorters." They are expected to come to the Island each year on "the first foggy day in March;" in July the place used to be full of them, and they are still plentiful in that month; early in September they depart.

Until about 50 years ago the snaring of these birds was a definite trade for boys in the summer months. "Snalter traps" abounded in various parts of the Island; roosts of "slats" were constructed in conical shape with open runs, and the trap itself was formed of a noose of horse-hair fixed to a thin piece of wood. There were two or four entrances for the birds, who are naturally fond of running into holes for concealment, especially when the sun is clouded, and the traps were known accordingly as "two-holders" or "four-holders." The Portland expression of mild contempt, as applied to a small house, "only a two-holder" derives from this. In years gone by between three and four hundred of these birds have been trapped in one day. On the Island they sold for threepence a dozen; but when sent to the mainland Weymouth tradesmen charged a penny apiece for them. They were regarded as a dainty and delicious article of food. King George III. was very fond of them;

and, cooked in the most approved method, they were provided for him during his visits to John Penn at the "Girt House" and Pennsylvania Castle. The picture shows Penn and a party of friends buying "snalters" from boys whose snares are seen set in the wide open street at Weston.

At the present day there is not much of interest at Weston except the ivy-clad ruins of the Jacobean house used as the old "Poor House" for the islanders, which superseded the earlier Poor House at Chesilton, and in turn gave way to a modern one at Fortune's Well.

XVII.—*The Common and Chesilton.*

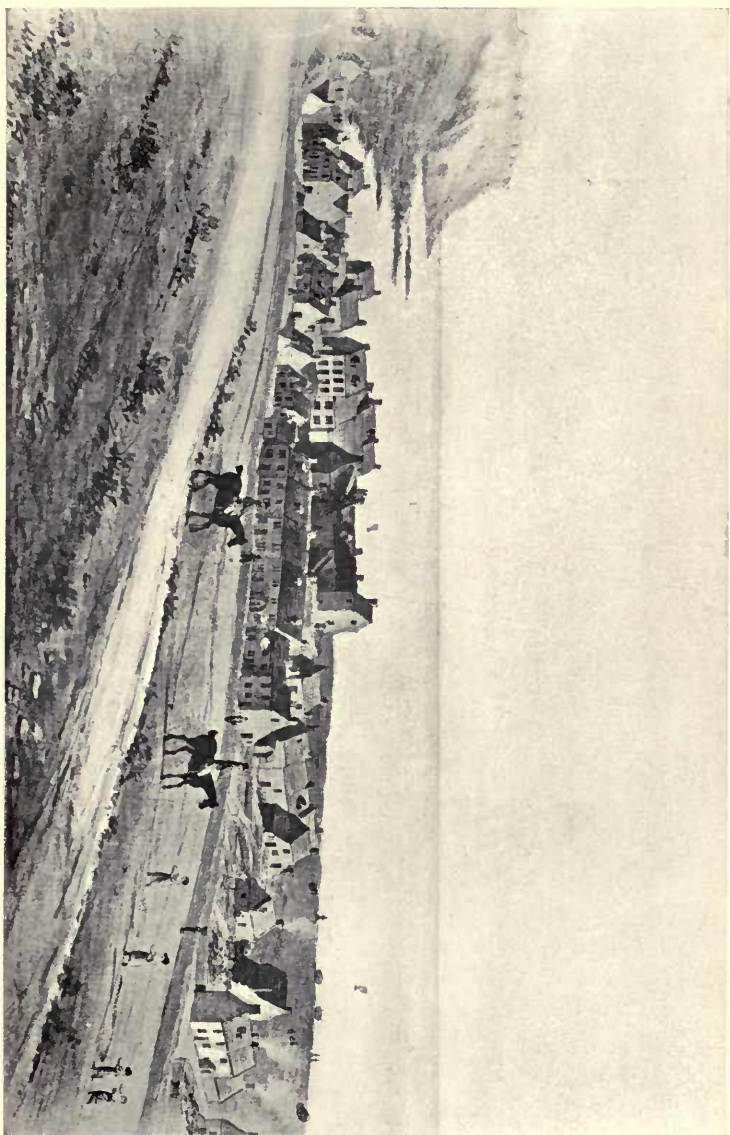
Penn, followed at a distance by his groom, is seen riding down over "the Common," and is met by children offering him articles for sale.

Chesilton, owing to its fishing industry, at one time wrested from Wakeham, the ancient "capital" of the Island, the distinction of being the townlet with the largest population. It contains several Jacobean and Georgian houses, most of them falling into decay.

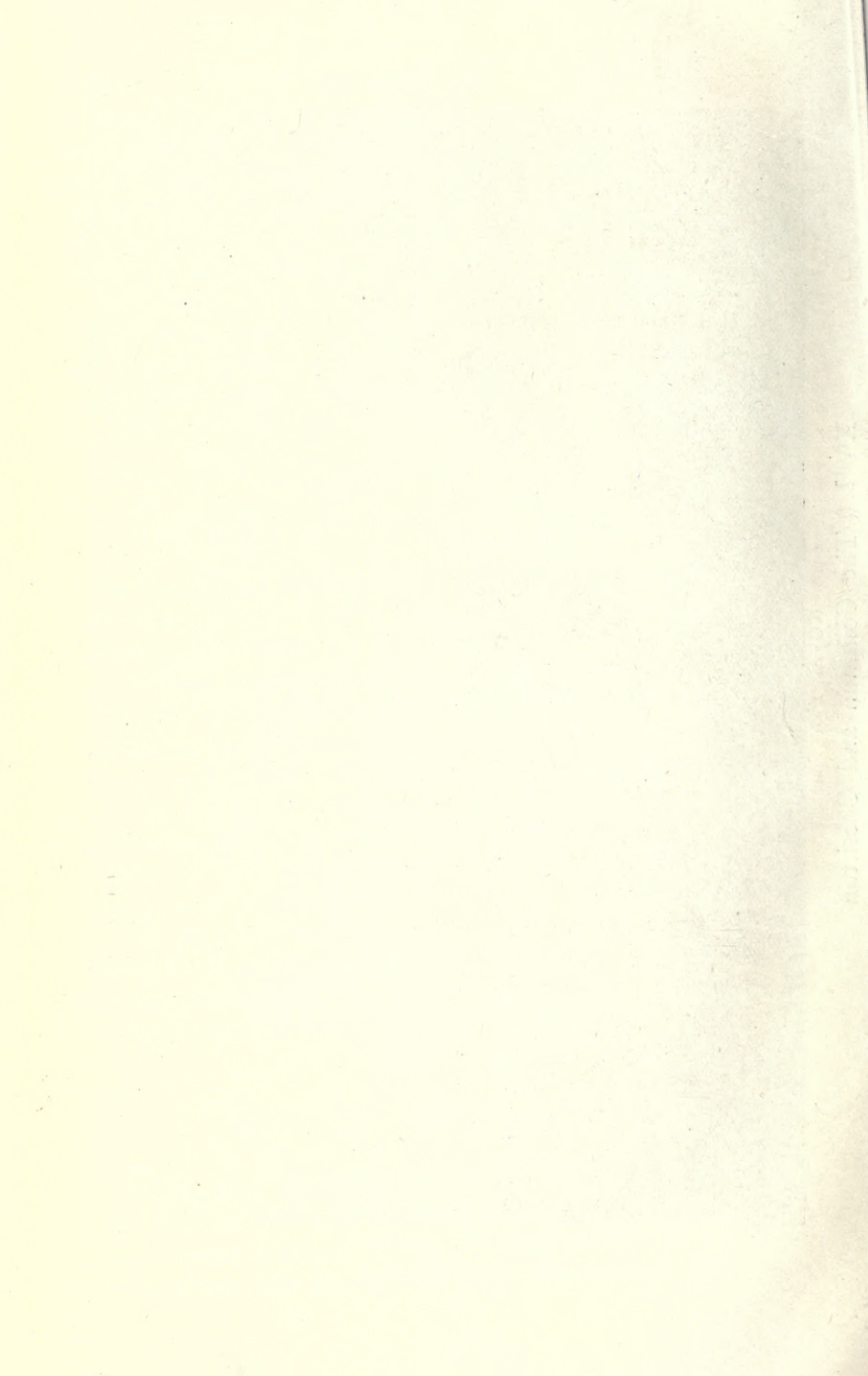
The question is sometimes asked by visitors to Portland "Why are so many of the oldest houses on the Island allowed to go into dilapidation?" The law of gavel-kind which prevails here may be a partial explanation. That which becomes the care of many becomes the care of none. It may also explain why some of the fields in Portland are so small as to be known locally as "lawns."

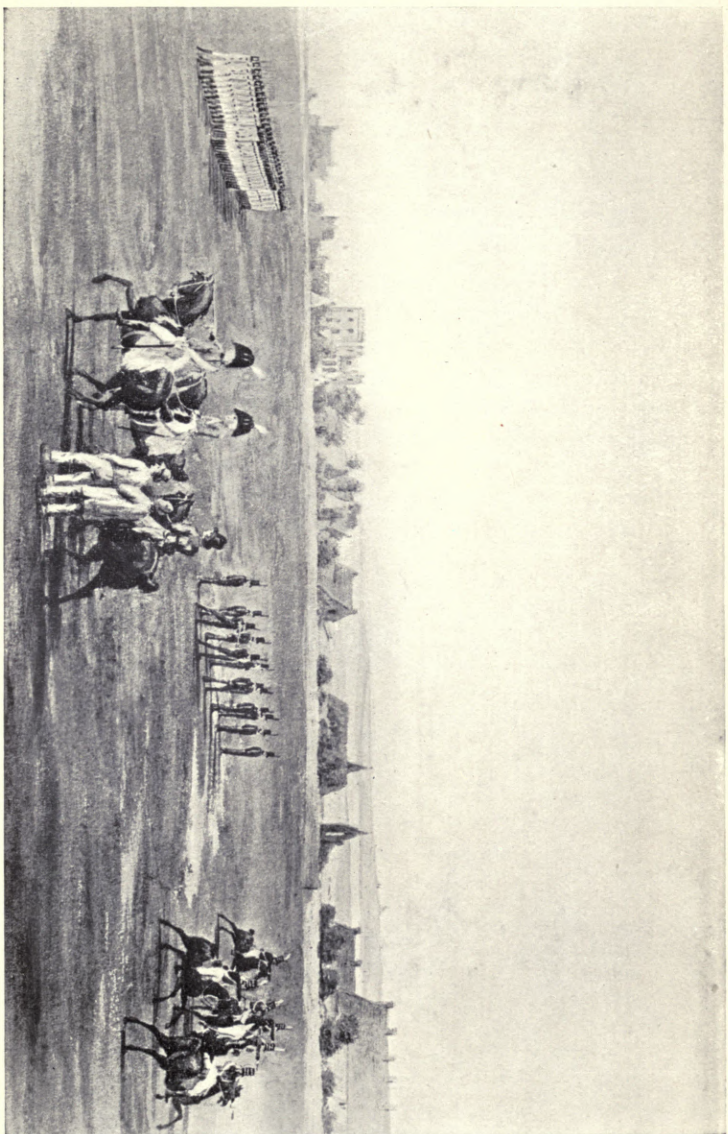
XVIII.—*The Royal Portland Legion.*

Among the Auxiliary and Voluntary Dorset Regiments and Corps recorded in the Army List of 1803 is the "Portland Island Legion," raised and commanded by Captain John Penn, and in which he took the greatest pride and



XVII. The Common and Chesilton





XVIII. The Royal Portland Legion

interest. In that year there was not a single vacancy in the "Legion" for any officers. There were three subalterns—it is known that two of them, Lowman and Gibbs, were Portlanders; there was also a paymaster and a surgeon, and the company was at its full strength of a little over 100 men, including non-commissioned officers. Presumably about the year 1806, some of these Volunteer Battalions, owing to less demand and necessity for their services, or from financial reasons, were disbanded in favour of a new force termed the "Local Militia."* The Local Militia, as distinct from the Dorset (Regular) Militia, was to be utilised for home-service in the county only.

The picture shows George III., accompanied by Penn, inspecting the "Legion" in Park Field. Portland was "a place of assembly" for Volunteers, and signal posts were erected by the Government at North Point ("Verne Signal") and the Bill. The islanders colloquially termed the corps "Coast Fencibles."

Mrs. Merrick Head has given recently to the Portland Urban District Council a small field-cannon which formerly stood in Pennsylvania Castle grounds, and bears an inscription stating that it was "presented to his Excellency John Penn, M.P., Governor of Portland, and Commandant of the Royal Portland Legion." It has been placed in the Victoria Gardens, Fortune's Well, where the towering and majestic Verne Citadel looks down with grim smiles on the little three-pounder.

*See *Notes on the History of the Dorset Volunteer Force*, by Colonel Sir William Watts, K.C.B., in the Dorset Field Club's *Proceedings*, Vol. XXXII.

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